

## SEQUENCE LISTING

<110> O'Brien, Timothy

<120> Repeat Sequences of the CA125 Gene and Their Use for Diagnostic and  
Therapeutic Interventions

<130> 40715-258841

<150> US 60/284,175

<151> 2001-04-17

<160> 306

<170> PatentIn version 3.0

<210> 1

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<212> PRT

<213> Homo sapiens

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Gln His Pro Gly Ser Arg Lys Phe Lys Thr Thr Glu Gly  
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<213> Homo sapiens

<400> 2

Phe Leu Thr Val Glu Arg Val Leu Gln Gly Leu

Sequence Listing

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Asp Thr Tyr Val Gly Pro Leu Tyr  
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Asp Gly Ala Ala Asn Gly Val Asp  
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<213> Homo sapiens

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Arg	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	
1				5				10					15			

ggt	ctg	ctc	agg	cct	gtg	ttc	aag	aac	acc	agt	gtt	ggc	cct	ctg	tac	96
Gly	Leu	Leu	Arg	Pro	Val	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	
			20					25				30				

tct ggc tgc aga ctg acc ttg ctc agg ccc aag aag gat ggg gca gcc 144  
 Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala  
           35                          40                          45

acc aaa gtg gat gcc atc tgc acc tac cgc cct gat ccc aaa agc cct 192  
 Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro  
           50                          55                          60

gga ctg gac aga gag cag cta tac tgg gag ctg agc cag ggt gat gca 240  
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<213> Homo sapiens

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           20                          25                          30

Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala  
           35                          40                          45

Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro  
       50                          55                          60

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Glu Arg Val Leu Gln Gly  
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Pro Leu Leu Ile Pro Phe  
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<213> Homo sapiens

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Glu Arg Val Leu Gln Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser  
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20 25 30  
Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His His Pro  
35 40 45  
Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
50 55 60  
Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ala Leu Asp  
65 70 75 80  
Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His Arg Ser Ser Val Ser  
85 90 95  
Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys  
100 105 110  
Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala Ser Pro Leu Leu Ile  
115 120 125  
Pro Phe Thr  
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<213> Homo sapiens

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Glu Arg Val Leu Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser  
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20 25 30  
Lys Asp Gly Ala Ala Thr Arg Ala Asp Ala Val Cys Thr His Arg Pro

35	40	45
Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu		
50	55	60
Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp		
65	70	75
Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr		
	85	90
Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg		
	100	105
Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile		
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		125

Pro Phe  
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Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr Ser		
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	20	25
Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Ile His Arg Leu		
	35	40
Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu		
	50	55
Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp		
65	70	75
Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser		
	85	90
Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly		
	100	105
Thr Pro Ser Ser Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu		
	115	120
		125

Leu Ile Pro Phe  
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<213> Homo sapiens

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Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser  
1 5 10 15

Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
20 25 30

Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu  
35 40 45

Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu  
50 55 60

Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp  
65 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala  
85 90 95

Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly  
100 105 110

Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile  
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Pro Phe  
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<210> 15

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<213> Homo sapiens

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Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser  
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Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu  
20 25 30

Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu  
35 40 45

Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu  
 50 55 60  
 Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp  
 65 70 75 80  
 Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu  
 85 90 95  
 Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly  
 100 105 110  
 Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Phe Leu Ile  
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 Pro Phe  
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 Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu  
 35 40 45  
 Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu  
 50 55 60  
 Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp  
 65 70 75 80  
 Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro  
 85 90 95  
 Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly  
 100 105 110  
 Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile  
 115 120 125  
 Pro Phe  
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<211> 130

<213> Homo sapiens

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser  
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu  
35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Thr Leu Asp  
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro  
85 90 95

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly  
100 105 110

Thr Pro Ala Ser Leu Pro Gly His Ile Val Pro Gly Pro Leu Leu Ile  
115 120 125

Pro Phe  
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<213> Homo sapiens

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Glu Arg Val Leu Gln Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Ser  
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Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
20 25 30

Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val  
35 40 45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu  
50 55 60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp  
65 70 75 80

Arg Asp Ser Leu Tyr Val Asp Gly Phe Asn Pro Trp Ser Ser Val Pro  
85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly  
100 105 110

Thr Pro Ser Pro Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile  
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Pro Phe Thr  
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<210> 19

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<213> Homo sapiens

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Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser  
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Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
20 25 30

Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu  
35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp  
65 70 75 80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro  
85 90 95

Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu  
100 105 110

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Val  
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Pro Phe Thr  
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Pro Phe Thr  
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&lt;210&gt; 20

&lt;211&gt; 130

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 20

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser  
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu  
20 25 30

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro  
35 40 45

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
50 55 60

Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp  
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro  
85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly  
100 105 110

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile  
115 120 125

Pro Phe  
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&lt;210&gt; 21

&lt;211&gt; 131

&lt;212&gt; PRT

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&lt;400&gt; 21

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser  
1 5 10 15

Ile Gly Pro Leu Tyr Ser Ser Cys Arg Leu Thr Leu Leu Arg Pro Glu  
20 25 30

Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys Thr His His Pro  
35 40 45

Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu  
 50 55 60  
 Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp  
 65 70 75 80  
 Arg Asp Ser Leu Tyr Val Asp Gly Phe Thr His Trp Ser Pro Ile Pro  
 85 90 95  
 Thr Thr Ser Thr Pro Gly Thr Ser Ile Val Asn Leu Gly Thr Ser Gly  
 100 105 110  
 Ile Pro Pro Ser Leu Pro Glu Thr Thr Ala Thr Gly Pro Leu Leu Ile  
 115 120 125  
 Pro Phe Thr  
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 Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu  
 20 25 30  
 Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro  
 35 40 45  
 Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu  
 50 55 60  
 Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp  
 65 70 75 80  
 Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro  
 85 90 95  
 Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly  
 100 105 110  
 Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met  
 115 120 125  
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp  
 130 135 140  
 Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu

145                      150                      155                      160  
 Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu  
                                  165                      170                      175  
 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala  
                                  180                      185                      190  
 Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg  
                                  195                      200                      205  
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
                                  210                      215                      220  
 His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu  
 225                                   230                      235                      240  
 Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr  
                                  245                      250                      255  
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                                  20                      25                      30  
 Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro  
                                  35                      40                      45  
 Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu  
                                  50                      55                      60  
 Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp  
 65                                   70                      75                      80  
 Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu  
                                  85                      90                      95  
 Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly  
                                  100                      105                      110

Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile  
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn  
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Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu  
145 150 155 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu  
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala  
180 185 190

Ala Thr Arg Val Asp Ala Val Cys Thr Gln Arg Pro Asp Pro Lys Ser  
195 200 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr  
210 215 220

His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu  
225 230 235 240

Tyr Val Asn Gly Leu Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr  
245 250 255

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser  
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Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe  
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<212> PRT

<213> Homo sapiens

<400> 24

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser  
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Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu  
35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp  
65 70 75 80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Thr Ser Val Pro  
                     85                    90                    95  
 Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly  
                     100                    105                    110  
 Thr Pro Phe Ser Leu Pro Ser Pro Ala Thr Ala Gly Pro Leu Leu Val  
                     115                    120                    125  
 Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp  
                     130                    135                    140  
 Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
                     145                    150                    155                    160  
 Gln Thr Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu  
                     165                    170                    175  
 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala  
                     180                    185                    190  
 Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser  
                     195                    200                    205  
 Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
                     210                    215                    220  
 Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu  
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<212> PRT

<213> Homo sapiens

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Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser  
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                     20                    25                    30  
 Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu  
                     35                    40                    45  
 Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
                     50                    55                    60  
 Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp

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65              70              75              80
Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro
      85              90              95
Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu
      100              105              110
Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile
      115              120              125
Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn
      130              135              140
Met His His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu
145              150              155              160
Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu
      165              170              175
Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala
      180              185              190
Ala Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln Ser
      195              200              205
Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser Gln Met Thr
      210              215              220
Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu
225              230              235              240
Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr
      245              250              255
Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro
      260              265              270
Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile Pro Phe
      275              280              285

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<210> 26

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<212> PRT

<213> Homo sapiens

<400> 26

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Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser
1              5              10              15
Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu
      20              25              30

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Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu  
 35 40 45  
 Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
 50 55 60  
 Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp  
 65 70 75 80  
 Arg Gly Ser Leu Tyr Val Asn Gly Phe Ser Arg Gln Ser Ser Met Thr  
 85 90 95  
 Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg  
 100 105 110  
 Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Ile  
 115 120 125  
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn  
 130 135 140  
 Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu  
 145 150 155 160  
 Gln Gly Leu Leu Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu  
 165 170 175  
 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Lys Pro Glu Lys Asp Gly Ala  
 180 185 190  
 Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg  
 195 200 205  
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
 210 215 220  
 His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu  
 225 230 235 240  
 Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr  
 245 250 255  
 Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser  
 260 265 270  
 Leu Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Ile Pro Phe  
 275 280 285

<210> 27

<211> 286

<212> PRT

<213> Homo sapiens

<400> 27

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser  
 1 5 10 15  
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
 20 25 30  
 Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu  
 35 40 45  
 Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
 50 55 60  
 Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp  
 65 70 75 80  
 Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro  
 85 90 95  
 Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Phe Gly  
 100 105 110  
 Thr Pro Ala Ser Leu His Gly His Thr Ala Pro Gly Pro Val Leu Val  
 115 120 125  
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp  
 130 135 140  
 Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
 145 150 155 160  
 Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu  
 165 170 175  
 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala  
 180 185 190  
 Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn  
 195 200 205  
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr  
 210 215 220  
 Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu  
 225 230 235 240  
 Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr  
 245 250 255  
 Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser  
 260 265 270  
 Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile Pro Phe  
 275 280 285

<210> 28

<211> 286

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 28

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser  
 1 5 10 15  
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
 20 25 30  
 Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu  
 35 40 45  
 Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu  
 50 55 60  
 Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp  
 65 70 75 80  
 Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro  
 85 90 95  
 Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly  
 100 105 110  
 Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val  
 115 120 125  
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp  
 130 135 140  
 Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
 145 150 155 160  
 Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu  
 165 170 175  
 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala  
 180 185 190  
 Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn  
 195 200 205  
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr  
 210 215 220  
 Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu  
 225 230 235 240  
 Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr  
 245 250 255  
 Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser  
 260 265 270

Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile Pro Phe  
 275 280 285

<210> 29

<211> 281

<212> PRT

<213> Homo sapiens

<400> 29

Glu Arg Val Leu Gln Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Ser  
 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
 20 25 30

Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val  
 35 40 45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu  
 50 55 60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp  
 65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro  
 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly  
 100 105 110

Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile  
 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn  
 130 135 140

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
 145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu  
 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala  
 180 185 190

Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser  
 195 200 205

Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
 210 215 220

Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu  
 225 230 235 240

Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg

195                      200                      205  
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr  
       210                      215

<210> 31

<211> 286

<212> PRT

<213> Homo sapiens

<400> 31

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser  
 1                      5                      10                      15  
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys  
                     20                      25                      30  
 Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro  
                     35                      40                      45  
 Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
       50                      55                      60  
 Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp  
 65                      70                      75                      80  
 Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro  
                     85                      90                      95  
 Thr Thr Ser Ile Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly  
                     100                      105                      110  
 Thr Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Val  
                     115                      120                      125  
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp  
       130                      135                      140  
 Met His Arg Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Val Leu  
 145                      150                      155                      160  
 Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu  
                     165                      170                      175  
 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala  
                     180                      185                      190  
 Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg  
                     195                      200                      205  
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
       210                      215                      220

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala  
180 185 190

Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser
		195				200				205					
Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Lys	Leu	Thr
		210				215				220					
Asn	Asp	Ile	Glu	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu
		225				230				235				240	
Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Ser	Ser	Val	Ser	Thr	Thr	Ser	Thr
				245				250						255	
Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Arg	Thr	Ser	Gly	Thr	Pro	Ser	Ser
		260						265				270			
Leu	Ser	Ser	Pro	Thr	Ile	Met	Ala	Ala	Gly	Pro	Leu	Leu	Ile	Pro	Phe
		275				280						285			
<210>	33														
<211>	284														
<212>	PRT														
<213>	Homo sapiens														
<400>	33														
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser
1			5						10				15		
Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu
		20						25				30			
Lys	Asp	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu	Tyr	His	Pro
		35				40				45					
Asn	Pro	Lys	Arg	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Cys	Glu	Leu
		50				55				60					
Ser	Gln	Leu	Thr	His	Asp	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Ser	Leu	Asp
		65		70						75				80	
Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Asn	Ser	Val	Pro
				85				90				95			
Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Tyr	Trp	Ala	Thr	Thr	Gly
		100						105				110			
Thr	Pro	Ser	Ser	Phe	Pro	Gly	His	Thr	Glu	Pro	Gly	Pro	Leu	Leu	Ile
		115				120				125					
Pro	Phe	Thr	Phe	Asn	Phe	Thr	Ile	Thr	Asn	Leu	His	Tyr	Glu	Glu	Asn
		130				135				140					
Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu



145                      150                      155                      160  
 Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu  
                                  165                      170                      175  
 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Glu Ala  
                                  180                      185                      190  
 Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly  
                                  195                      200                      205  
 Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
                                  210                      215                      220  
 Asn Ser Ile His Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu  
 225                                   230                      235                      240  
 Tyr Val Asn Gly Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser Thr  
                                  245                      250                      255  
 Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser  
                                  260                      265                      270  
 Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile  
                                  275                      280  
 <210> 34  
 <211> 288  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 34  
 Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Ser Lys Asn Ser Ser  
 1                                   5                      10                      15  
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu  
                                  20                      25                      30  
 Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro  
                                  35                      40                      45  
 Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
                                  50                      55                      60  
 Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp  
 65                                   70                      75                      80  
 Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro  
                                  85                      90                      95  
 Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly  
                                  100                      105                      110

145 150 155 160  
 165 170 175  
 180 185 190  
 195 200 205  
 210 215 220  
 225 230 235 240  
 245 250 255  
 260 265 270  
 275 280  
 285 290 295  
 300 305 310  
 315 320 325  
 330 335 340  
 345 350 355  
 360 365 370  
 375 380 385  
 390 395 400  
 405 410 415  
 420 425 430  
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 450 455 460  
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 480 485 490  
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 585 590 595  
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 615 620 625  
 630 635 640  
 645 650 655  
 660 665 670  
 675 680 685  
 690 695 700  
 705 710 715  
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 765 770 775  
 780 785 790  
 795 800 805  
 810 815 820  
 825 830 835  
 840 845 850  
 855 860 865  
 870 875 880  
 885 890 895  
 900 905 910  
 915 920 925  
 930 935 940  
 945 950 955  
 960 965 970  
 975 980 985  
 990 995 1000

Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile  
115 120 125

Pro Phe Thr Val Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn  
130 135 140

Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
145 150 155 160

Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu  
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala  
180 185 190

Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser  
195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr  
210 215 220

Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu  
225 230 235 240

Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr  
245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser  
260 265 270

Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu Ile Pro Phe  
275 280 285

<210> 35

<211> 274

<212> PRT

<213> Homo sapiens

<400> 35

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser  
1 5 10 15

Val Gly Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
20 25 30

Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys Thr His Arg Pro  
35 40 45

Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu  
50 55 60

Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp  
65 70 75 80

Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Met Thr  
                     85                    90                    95  
 Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg  
                     100                    105                    110  
 Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Val  
                     115                    120                    125  
 Leu Phe Thr Ile Asn Phe Thr Ile Thr Asn Gln Arg Tyr Glu Glu Asn  
                     130                    135                    140  
 Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
                     145                    150                    155                    160  
 Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu  
                     165                    170                    175  
 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala  
                     180                    185                    190  
 Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser  
                     195                    200                    205  
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
                     210                    215                    220  
 His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Gln Asp Arg Asp Ser Leu  
                     225                    230                    235                    240  
 Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile  
                     245                    250                    255  
 Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser  
                     260                    265                    270  
 Leu Pro

<210> 36

<211> 386

<212> PRT

<213> Homo sapiens

<400> 36

Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser  
 1                    5                    10                    15  
 Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
                     20                    25                    30  
 Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu

35					40					45					
Asp	Pro	Leu	Asn	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu
50						55					60				
Ser	Lys	Leu	Thr	Arg	Gly	Ile	Ile	Glu	Leu	Gly	Pro	Tyr	Leu	Leu	Asp
65					70					75					80
Arg	Gly	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Asn	Phe	Val	Pro
				85					90					95	
Ile	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Gly	Thr	Ser	Glu
			100					105					110		
Thr	Pro	Ser	Ser	Leu	Pro	Arg	Pro	Ile	Val	Pro	Gly	Pro	Leu	Leu	Val
		115					120					125			
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Ala
	130					135					140				
Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu
145					150					155					160
Gln	Gly	Leu	Leu	Arg	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Ser	Ser	Leu
				165					170					175	
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala
			180					185					190		
Ala	Thr	Arg	Val	Asp	Ala	Ala	Cys	Thr	Tyr	Arg	Pro	Asp	Pro	Lys	Ser
		195					200					205			
Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr
	210					215					220				
His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Val	Ser	Leu
225					230					235					240
Tyr	Val	Asn	Gly	Phe	Asn	Pro	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Thr
				245					250					255	
Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Ala	Thr	Ser	Gly	Thr	Pro	Ser	Ser
			260					265					270		
Leu	Pro	Gly	His	Thr	Ala	Pro	Val	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Leu
		275					280					285			
Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	His	Pro
	290					295					300				
Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu
305					310					315					320
Arg	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Ile	Gly	Pro	Leu	Tyr	Ser	Ser	Cys
				325					330					335	
Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Lys	Ala	Ala	Thr	Arg	Val
			340					345					350		

Asp Ala Ile Cys Thr His His Pro Asp Pro Gln Ser Pro Gly Leu Asn  
 355 360 365

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Thr  
 370 375 380

Glu Leu  
 385

<210> 37

<211> 438

<212> PRT

<213> Homo sapiens

<400> 37

Glu Arg Val Leu His Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Arg  
 1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
 20 25 30

Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val  
 35 40 45

Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu  
 50 55 60

Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp  
 65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro  
 85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly  
 100 105 110

Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile  
 115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn  
 130 135 140

Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
 145 150 155 160

Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu  
 165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Phe Lys Pro Glu Lys His Glu Ala  
 180 185 190

Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly  
 195 200 205

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Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
 210 215 220  
 Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu  
 225 230 235 240  
 Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile  
 245 250 255  
 Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser  
 260 265 270  
 Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu  
 275 280 285  
 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr  
 290 295 300  
 Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu  
 305 310 315 320  
 Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys  
 325 330 335  
 Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala Ala Thr Gly Val  
 340 345 350  
 Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp  
 355 360 365  
 Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile  
 370 375 380  
 Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu Tyr Val Asn Gly  
 385 390 395 400  
 Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr Pro Gly Thr Ser  
 405 410 415  
 Thr Val His Leu Gly Thr Ser Glu Ile His Pro Ser Leu Pro Arg Pro  
 420 425 430  
 Ile Val Pro Gly Pro Leu  
 435  
 <210> 38  
 <211> 420  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 38  
 Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys

1	5	10	15
Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn	20	25	30
Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser	35	40	45
Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg	50	55	60
Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr	65	70	75
Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr	85	90	95
Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro	100	105	110
Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met	115	120	125
Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Ser Val Leu Gln	130	135	140
Gly Leu Leu Thr Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr	145	150	155
Ser Gly Cys Arg Leu Ile Ser Leu Arg Ser Glu Lys Asp Gly Ala Ala	165	170	175
Thr Gly Val Asp Ala Ile Cys Thr His His Leu Asn Pro Gln Ser Pro	180	185	190
Gly Leu Asp Arg Glu Gln Leu Tyr Trp Gln Leu Ser Gln Met Thr Asn	195	200	205
Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr	210	215	220
Val Asn Gly Phe Thr His Arg Ser Leu Gly Leu Thr Thr Ser Thr Pro	225	230	235
Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val	245	250	255
Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn	260	265	270
Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly	275	280	285
Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu Arg	290	295	300
Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg	305	310	315
			320

Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp  
 325 330 335  
 Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg  
 340 345 350  
 Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu  
 355 360 365  
 Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe  
 370 375 380  
 Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Pro Thr  
 385 390 395 400  
 Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser Lys Pro Gly Pro Ser  
 405 410 415  
 Ala Ala Ser Pro  
 420  
 <210> 39  
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 <212> PRT  
 <213> Homo sapiens  
  
 <400> 39  
 Glu Arg Val Leu Gln Gly Pro Leu Ser Pro Ile Phe Lys Asn Ser Ser  
 1 5 10 15  
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu  
 20 25 30  
 Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro  
 35 40 45  
 Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
 50 55 60  
 Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp  
 65 70 75 80  
 Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro  
 85 90 95  
 Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly  
 100 105 110  
 Thr Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile  
 115 120 125  
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn  
 130 135 140



Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu  
 145 150 155 160  
 Gln Gly Leu Leu Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu  
 165 170 175  
 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala  
 180 185 190  
 Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg  
 195 200 205  
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr  
 210 215 220  
 His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu  
 225 230 235 240  
 Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr  
 245 250 255  
 Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser  
 260 265 270  
 Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu  
 275 280 285  
 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr  
 290 295 300  
 Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu  
 305 310 315 320  
 Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys  
 325 330 335  
 Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val  
 340 345 350  
 Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp  
 355 360 365  
 Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr  
 370 375 380  
 Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly  
 385 390 395 400  
 Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser  
 405 410 415  
 Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His  
 420 425 430  
 Thr Ala Pro Gly Pro Leu Leu  
 435

&lt;210&gt; 40

&lt;211&gt; 424

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 40

Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg  
1 5 10 15

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Tyr Thr His  
20 25 30

Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp  
35 40 45

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr  
50 55 60

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Ser  
65 70 75 80

Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr  
85 90 95

Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu  
100 105 110

Leu Ile Pro Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu  
115 120 125

Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg  
130 135 140

Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly  
145 150 155 160

Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp  
165 170 175

Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro  
180 185 190

Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu Ser Gln  
195 200 205

Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp  
210 215 220

Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro Thr Thr  
225 230 235 240

Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu Thr Pro  
245 250 255

Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe  
260 265 270

Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His  
275 280 285

Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly  
290 295 300

Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser  
305 310 315 320

Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr  
325 330 335

Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly  
340 345 350

Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser  
355 360 365

Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val  
370 375 380

Asn Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly  
385 390 395 400

Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro  
405 410 415

Gly His Thr Ala Pro Val Pro Leu  
420

<210> 41

<211> 418

<212> PRT

<213> Homo sapiens

<400> 41

Thr Leu Leu Arg Pro Lys Lys Asp Gly Val Ala Thr Gly Val Asp Ala  
1 5 10 15

Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu  
20 25 30

Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu  
35 40 45

Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr  
50 55 60

His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr Val

65					70						75				80
Asp	Leu	Arg	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Ser	Ser	Pro	Thr	Ile
				85					90					95	
Met	Ala	Ala	Gly	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Ile	Asn	Phe	Thr	Ile
			100					105					110		
Thr	Asn	Leu	Arg	Tyr	Glu	Glu	Asn	Met	His	His	Pro	Gly	Ser	Arg	Lys
		115					120					125			
Phe	Asn	Thr	Met	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Met	Pro	Leu	Phe
	130					135					140				
Lys	Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu
145					150					155					160
Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Arg	Val	Asp	Ala	Val	Cys
				165					170					175	
Thr	His	Arg	Pro	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu
			180					185					190		
Tyr	Trp	Lys	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Thr	Glu	Leu	Gly	Pro
		195					200					205			
Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg
	210					215					220				
Ser	Ser	Met	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Val
225					230					235					240
Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Ser	Pro	Ser	Pro	Thr	Thr	Ala	Gly
				245					250					255	
Pro	Leu	Leu	Met	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln
			260					265					270		
Tyr	Glu	Glu	Asp	Met	Arg	Arg	Thr	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met
		275					280					285			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser
	290					295					300				
Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu
305					310					315					320
Lys	His	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	Leu	Arg	Leu
				325					330					335	
Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu
			340					345					350		
Ser	Gln	Leu	Thr	Asn	Ser	Val	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp
		355					360					365			
Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val	Pro
	370					375					380				

Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly  
385 390 395 400

Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Ile  
405 410 415

Pro Phe

<210> 42

<211> 443

<212> PRT

<213> Homo sapiens

<400> 42

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser  
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
20 25 30

Lys Asp Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His Arg Pro  
35 40 45

Asp Pro Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp Glu Leu  
50 55 60

Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp  
65 70 75 80

Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr Gln Arg Ser Ser Val Pro  
85 90 95

Thr Thr Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu  
100 105 110

Thr Pro Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu  
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp  
130 135 140

Met His Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
145 150 155 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu  
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala  
180 185 190

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Ser Glu  
195 200 205

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
 210 215 220  
 Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu  
 225 230 235 240  
 Tyr Val Asn Gly Phe Thr His Ser Gly Val Leu Cys Pro Pro Pro Ser  
 245 250 255  
 Ile Leu Gly Ile Phe Thr Val Gln Pro Glu Thr Phe Glu Thr Pro Ser  
 260 265 270  
 Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe Thr  
 275 280 285  
 Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His Arg  
 290 295 300  
 Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
 305 310 315 320  
 Leu Met Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly  
 325 330 335  
 Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Gln Glu Ala Ala Thr Gly  
 340 345 350  
 Val Asp Thr Ile Cys Thr His Arg Val Asp Pro Ile Gly Pro Gly Leu  
 355 360 365  
 Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile  
 370 375 380  
 Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn  
 385 390 395 400  
 Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr  
 405 410 415  
 Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly  
 420 425 430  
 His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe  
 435 440

<210> 43

<211> 442

<212> PRT

<213> Homo sapiens

<400> 43

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser

1	5								10				15			
Leu	Glu	Tyr	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ala	Ser	Leu	Arg	Pro	Glu	
			20				25						30			
Lys	Asp	Ser	Ser	Ala	Met	Ala	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Pro	
		35				40						45				
Asp	Pro	Glu	Asp	Leu	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	
		50				55				60						
Ser	Asn	Leu	Thr	Asn	Gly	Ile	Gln	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	
65				70						75					80	
Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Met	Pro	
			85				90						95			
Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Val	Gly	Thr	Ser	Gly	
			100				105						110			
Thr	Pro	Ser	Ser	Ser	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Met	
		115				120						125				
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	
		130				135			140							
Met	Arg	Arg	Thr	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met	Glu	Ser	Val	Leu	
145				150			155								160	
Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	
			165				170						175			
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Lys	Lys	Asp	Gly	Ala	
			180				185						190			
Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	
		195				200						205				
Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Lys	Leu	Thr	
		210				215			220							
Asn	Asp	Ile	Glu	Glu	Val	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	
225				230			235								240	
Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Phe	Val	Ala	Pro	Thr	Ser	Thr	
			245				250						255			
Leu	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	
			260				265						270			
Leu	Pro	Ser	Pro	Thr	Thr	Gly	Val	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Leu	
		275				280			285							
Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asn	Met	Gly	His	Pro	
		290				295			300							
Gly	Ser	Arg	Lys	Phe	Asn	Ile	Met	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	
305				310			315								320	

Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys  
325 330 335

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val  
340 345 350

Val Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp  
355 360 365

Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr  
370 375 380

Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu Tyr Val Asn Gly  
385 390 395 400

Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser  
405 410 415

Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro  
420 425 430

Thr Thr Ala Ser Pro Leu Leu Ile Pro Phe  
435 440

<210> 44

<211> 442

<212> PRT

<213> Homo sapiens

<400> 44

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser  
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
20 25 30

Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu  
35 40 45

Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
50 55 60

Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp  
65 70 75 80

Arg Gly Ser Leu Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro  
85 90 95

Ile Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu  
100 105 110

Thr Pro Ser Ser Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile  
115 120 125

125 130 135 140 145 150 155 160 165 170 175 180 185 190 195 200 205 210 215 220 225 230 235 240 245 250 255 260 265 270 275 280 285 290 295 300 305 310 315 320 325 330 335 340 345 350 355 360 365 370 375 380 385 390 395 400 405 410 415 420 425 430 435 440 445 450 455 460 465 470 475 480 485 490 495 500 505 510 515 520 525 530 535 540 545 550 555 560 565 570 575 580 585 590 595 600 605 610 615 620 625 630 635 640 645 650 655 660 665 670 675 680 685 690 695 700 705 710 715 720 725 730 735 740 745 750 755 760 765 770 775 780 785 790 795 800 805 810 815 820 825 830 835 840 845 850 855 860 865 870 875 880 885 890 895 900 905 910 915 920 925 930 935 940 945 950 955 960 965 970 975 980 985 990 995



Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn  
 130 135 140  
 Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu  
 145 150 155 160  
 Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu  
 165 170 175  
 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Ser Ser  
 180 185 190  
 Thr Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp  
 195 200 205  
 Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr  
 210 215 220  
 Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu  
 225 230 235 240  
 Tyr Val Asn Gly Phe Thr His Arg Ser Phe Met Pro Thr Thr Ser Thr  
 245 250 255  
 Leu Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser  
 260 265 270  
 Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu  
 275 280 285  
 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr  
 290 295 300  
 Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu  
 305 310 315 320  
 Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys  
 325 330 335  
 Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Gly Val  
 340 345 350  
 Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn  
 355 360 365  
 Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu  
 370 375 380  
 Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
 385 390 395 400  
 Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser  
 405 410 415  
 Thr Val Asp Pro Arg Thr Ser Gly Thr Pro Ser Ser Leu Ser Ser Pro  
 420 425 430  
 Thr Ile Met Ala Ala Gly Pro Leu Leu Ile

435  
 <210> 45  
 <211> 379  
 <212> PRT  
 <213> Homo sapiens

<400> 45

Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	1	5	10	15
Val	Gly	Leu	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	20	25	30	
Lys	Asn	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Ile	Cys	Ser	His	Arg	Leu	35	40	45	
Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	50	55	60	
Ser	Gln	Leu	Thr	His	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	65	70	75	80
Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val	Ala	85	90	95	
Pro	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	100	105	110	
Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro	Thr	Thr	Ala	Val	Pro	Leu	Leu	Ile	115	120	125	
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Lys	Tyr	Glu	Glu	Asp	130	135	140	
Met	His	Cys	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	145	150	155	160
Gln	Ser	Leu	Phe	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	165	170	175	
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Phe	Arg	Ser	Glu	Lys	Asp	Gly	Ala	180	185	190	
Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	195	200	205	
Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	210	215	220	
Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	225	230	235	240

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Tyr Val Asn Gly Phe Thr His Gln Thr Ser Ala Pro Asn Thr Ser Thr  
245 250 255

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser  
260 265 270

Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu  
275 280 285

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr  
290 295 300

Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu  
305 310 315 320

Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys  
325 330 335

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Val  
340 345 350

Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn  
355 360 365

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu  
370 375

<210> 46

<211> 439

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)..(439)

<223> Any "X" = any amino acid

<400> 46

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser  
1 5 10 15

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
20 25 30

Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu Arg Leu  
35 40 45

Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu

50					55					60						
Ser	Gln	Leu	Thr	Asn	Ser	Val	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	
65					70					75					80	
Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val	Pro	
				85					90					95		
Thr	Thr	Ser	Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu	Glu	Thr	Ser	Gly	
			100					105					110			
Thr	Pro	Ala	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Gly	Pro	Leu	Leu	Ile	
		115					120					125				
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	His	Tyr	Glu	Glu	Asn	
	130					135					140					
Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met	Glu	Arg	Val	Leu	
145					150					155					160	
Gln	Gly	Cys	Leu	Val	Pro	Cys	Ser	Arg	Asn	Thr	Asn	Val	Gly	Leu	Leu	
				165					170					175		
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	
			180				185						190			
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	
			195				200					205				
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	
			210				215					220				
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	
225					230					235					240	
Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val	Ala	Pro	Thr	Ser	Thr	
				245					250				255			
Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	
			260					265					270			
Leu	Pro	Ser	Pro	Thr	Thr	Val	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	
		275					280					285				
Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Gly	Glu	Asp	Met	Arg	His	Pro	Gly	
		290				295					300					
Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	
305					310					315					320	
Pro	Leu	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	
				325					330					335		
Leu	Ile	Ser	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	
			340					345					350			
Ala	Ile	Cys	Thr	His	His	Leu	Asn	Pro	Gln	Ser	Pro	Gly	Leu	Asp	Arg	
		355					360					365				

Glu Gln Leu Tyr Trp Gln Leu Ser Gln Val Thr Asn Gly Ile Lys Glu  
370 375 380

Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe  
385 390 395 400

Thr His Arg Ser Ser Gly Leu Thr Thr Ser Thr Pro Trp Thr Ser Thr  
405 410 415

Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val Pro Ser Pro Thr  
420 425 430

Thr Ala Gly Pro Leu Leu Ile  
435

<210> 47

<211> 1366

<212> PRT

<213> Homo sapiens

<400> 47

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser  
1 5 10 15

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu  
20 25 30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro  
35 40 45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu  
50 55 60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp  
65 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro  
85 90 95

Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly  
100 105 110

Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met  
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp  
130 135 140

Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu  
145 150 155 160

Gln Gly Pro Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu  
165 170 175

1366: Homo sapiens

Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala  
 180 185 190  
 Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg  
 195 200 205  
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
 210 215 220  
 His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu  
 225 230 235 240  
 Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr  
 245 250 255  
 Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser  
 260 265 270  
 Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu  
 275 280 285  
 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro  
 290 295 300  
 Gly Ser Arg Lys Phe Asn Ile Thr Glu Arg Val Leu Gln Gly Leu Leu  
 305 310 315 320  
 Asn Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys  
 325 330 335  
 Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met  
 340 345 350  
 Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp  
 355 360 365  
 Arg Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr  
 370 375 380  
 Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly  
 385 390 395 400  
 Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser  
 405 410 415  
 Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His  
 420 425 430  
 Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile  
 435 440 445  
 Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys  
 450 455 460  
 Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe  
 465 470 475 480  
 Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu

485										490					495				
Leu	Arg	Pro	Glu	Lys	His	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys				
			500					505					510						
Thr	Leu	Arg	Leu	Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu				
		515					520					525							
Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Ser	Val	Thr	Glu	Leu	Gly	Pro				
	530					535					540								
Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg				
545					550					555					560				
Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu				
				565					570					575					
Glu	Thr	Ser	Gly	Thr	Pro	Ala	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Gly				
			580					585					590						
Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln				
		595					600					605							
Tyr	Glu	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr				
	610					615					620								
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser				
625					630					635					640				
Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu				
				645					650					655					
Lys	Arg	Gly	Ala	Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Leu				
			660					665					670						
Asp	Pro	Leu	Asn	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu				
		675					680					685							
Ser	Lys	Leu	Thr	Arg	Gly	Ile	Ile	Glu	Leu	Gly	Pro	Tyr	Leu	Leu	Asp				
	690					695					700								
Arg	Gly	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Asn	Phe	Val	Pro				
705					710					715					720				
Ile	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Gly	Thr	Ser	Glu				
				725					730					735					
Thr	Pro	Ser	Ser	Leu	Pro	Arg	Pro	Ile	Val	Pro	Gly	Pro	Leu	Leu	Ile				
			740					745					750						
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asn				
		755					760					765							
Met	Gly	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ile	Thr	Glu	Arg	Val	Leu				
	770					775					780								
Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Arg	Asn	Ser	Ser	Leu	Glu	Tyr	Leu				
785					790					795					800				

Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser  
 805 810 815  
 Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp  
 820 825 830  
 Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr  
 835 840 845  
 Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu  
 850 855 860  
 Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr  
 865 870 875 880  
 Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser  
 885 890 895  
 Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu  
 900 905 910  
 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr  
 915 920 925  
 Gly Ser Arg Lys Phe Asn Thr Met Glu Ser Val Leu Gln Gly Leu Leu  
 930 935 940  
 Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys  
 945 950 955 960  
 Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Gly Val  
 965 970 975  
 Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn  
 980 985 990  
 Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu  
 995 1000 1005  
 Glu Val Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn  
 1010 1015 1020  
 Gly Phe Thr His Arg Ser Phe Val Ala Pro Thr Ser Thr Leu Gly  
 1025 1030 1035  
 Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu  
 1040 1045 1050  
 Pro Ser Pro Thr Thr Gly Val Pro Leu Leu Ile Pro Phe Thr Leu  
 1055 1060 1065  
 Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His  
 1070 1075 1080  
 Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu Gln Gly  
 1085 1090 1095  
 Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser Val Gly Ser Leu Tyr  
 1100 1105 1110



Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala
1115						1120					1125			
Ala	Thr	Arg	Val	Asp	Ala	Val	Cys	Thr	His	Arg	Pro	Asp	Pro	Lys
1130						1135					1140			
Ser	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Lys	Leu	Ser	Gln
1145						1150					1155			
Leu	Thr	His	Gly	Ile	Ile	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg
1160						1165					1170			
His	Ser	Phe	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Ser	Ser	Met	Thr
1175						1180					1185			
Thr	Thr	Arg	Thr	Pro	Asp	Thr	Ser	Thr	Met	His	Leu	Ala	Thr	Ser
1190						1195					1200			
Arg	Thr	Pro	Ala	Ser	Leu	Ser	Gly	Pro	Thr	Thr	Ala	Ser	Pro	Leu
1205						1210					1215			
Leu	Val	Leu	Phe	Thr	Ile	Asn	Phe	Thr	Ile	Thr	Asn	Gln	Arg	Tyr
1220						1225					1230			
Glu	Glu	Asn	Met	His	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr
1235						1240					1245			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Pro	Val	Phe	Lys	Asn	Thr
1250						1255					1260			
Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg
1265						1270					1275			
Pro	Lys	Lys	Asp	Gly	Ala	Ala	Thr	Lys	Val	Asp	Ala	Ile	Cys	Thr
1280						1285					1290			
Tyr	Arg	Pro	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu
1295						1300					1305			
Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly
1310						1315					1320			
Pro	Tyr	Thr	Gln	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr
1325						1330					1335			
His	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr	Ser	Ala
1340						1345					1350			
Val	His	Leu	Glu	Thr	Ser	Gly	Thr	Pro	Ala	Ser	Leu	Pro		
1355						1360					1365			

&lt;210&gt; 48

&lt;211&gt; 1148

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 48

Met	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr	Ser	Gly	Cys	
1				5					10					15		
Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Arg	Val	
			20					25					30			
Asp	Ala	Val	Cys	Thr	His	Arg	Pro	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	
		35					40					45				
Arg	Glu	Arg	Leu	Tyr	Trp	Lys	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Ile	
	50					55					60					
Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	His	Ser	Phe	Tyr	Val	Asn	Gly	
65					70					75					80	
Phe	Thr	His	Gln	Ser	Ser	Met	Thr	Thr	Thr	Arg	Thr	Pro	Asp	Thr	Ser	
				85					90					95		
Thr	Met	His	Leu	Ala	Thr	Ser	Arg	Thr	Pro	Ala	Ser	Leu	Ser	Gly	Pro	
			100					105					110			
Thr	Thr	Ala	Ser	Pro	Leu	Leu	Val	Leu	Phe	Thr	Ile	Asn	Phe	Thr	Ile	
		115					120					125				
Thr	Asn	Gln	Arg	Tyr	Glu	Glu	Asn	Met	His	His	Pro	Gly	Ser	Arg	Lys	
	130					135					140					
Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Pro	Val	Phe	
145					150					155					160	
Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	
				165					170					175		
Leu	Arg	Pro	Lys	Lys	Asp	Gly	Ala	Ala	Thr	Lys	Val	Asp	Ala	Ile	Cys	
			180					185					190			
Thr	Tyr	Arg	Pro	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	
	195						200					205				
Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	
	210					215					220					
Tyr	Thr	Gln	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	
225					230					235					240	
Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu	
				245					250					255		
Glu	Thr	Ser	Gly	Thr	Pro	Ala	Ser	Leu	Pro	Gly	Pro	Ser	Ala	Ala	Ser	
			260					265					270			
Pro	Leu	Leu	Val	Leu	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Arg	
		275					280					285				

Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr  
 290 295 300  
 Glu Arg Val Leu Gln Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser  
 305 310 315 320  
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
 325 330 335  
 Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His His Pro  
 340 345 350  
 Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
 355 360 365  
 Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly His Tyr Ala Leu Asp  
 370 375 380  
 Asn Asp Ser Leu Phe Val Asn Gly Phe Thr His Arg Ser Ser Val Ser  
 385 390 395 400  
 Thr Thr Ser Thr Pro Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys  
 405 410 415  
 Thr Pro Ala Ser Ile Phe Gly Pro Ser Ala Ala Ser His Leu Leu Ile  
 420 425 430  
 Leu Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn  
 435 440 445  
 Met Trp Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln  
 450 455 460  
 Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr  
 465 470 475 480  
 Ser Gly Ser Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Glu Ala  
 485 490 495  
 Thr Gly Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Thr Gly Pro  
 500 505 510  
 Gly Leu Asp Arg Glu Gln Leu Tyr Leu Glu Leu Ser Gln Leu Thr His  
 515 520 525  
 Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr  
 530 535 540  
 Val Asn Gly Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Thr Gly  
 545 550 555 560  
 Val Val Ser Glu Glu Pro Phe Thr Leu Asn Phe Thr Ile Asn Asn Leu  
 565 570 575  
 Arg Tyr Met Ala Asp Met Gly Gln Pro Gly Ser Leu Lys Phe Asn Ile  
 580 585 590  
 Thr Asp Asn Val Met Lys His Leu Leu Ser Pro Leu Phe Gln Arg Ser

595					600					605					
Ser	Leu	Gly	Ala	Arg	Tyr	Thr	Gly	Cys	Arg	Val	Ile	Ala	Leu	Arg	Ser
610						615					620				
Val	Lys	Asn	Gly	Ala	Glu	Thr	Arg	Val	Asp	Leu	Leu	Cys	Thr	Tyr	Leu
625					630					635					640
Gln	Pro	Leu	Ser	Gly	Pro	Gly	Leu	Pro	Ile	Lys	Gln	Val	Phe	His	Glu
				645					650					655	
Leu	Ser	Gln	Gln	Thr	His	Gly	Ile	Thr	Arg	Leu	Gly	Pro	Tyr	Ser	Leu
			660					665					670		
Asp	Lys	Asp	Ser	Leu	Tyr	Leu	Asn	Gly	Tyr	Asn	Glu	Pro	Gly	Leu	Asp
		675					680					685			
Glu	Pro	Pro	Thr	Thr	Pro	Lys	Pro	Ala	Thr	Thr	Phe	Leu	Pro	Pro	Leu
	690					695					700				
Ser	Glu	Ala	Thr	Thr	Ala	Met	Gly	Tyr	His	Leu	Lys	Thr	Leu	Thr	Leu
705					710					715					720
Asn	Phe	Thr	Ile	Ser	Asn	Leu	Gln	Tyr	Ser	Pro	Asp	Met	Gly	Lys	Gly
			725					730						735	
Ser	Ala	Thr	Phe	Asn	Ser	Thr	Glu	Gly	Val	Leu	Gln	His	Leu	Leu	Arg
			740					745					750		
Pro	Leu	Phe	Gln	Lys	Ser	Ser	Met	Gly	Pro	Phe	Tyr	Leu	Gly	Cys	Gln
		755					760					765			
Leu	Ile	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp
	770					775					780				
Thr	Thr	Cys	Thr	Tyr	His	Pro	Asp	Pro	Val	Gly	Pro	Gly	Leu	Asp	Ile
785					790					795					800
Gln	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Gly	Val	Thr	Gln
				805					810					815	
Leu	Gly	Phe	Tyr	Val	Leu	Asp	Arg	Asp	Ser	Leu	Phe	Ile	Asn	Gly	Tyr
			820					825					830		
Ala	Pro	Gln	Asn	Leu	Ser	Ile	Arg	Gly	Glu	Tyr	Gln	Ile	Asn	Phe	His
		835					840					845			
Ile	Val	Asn	Trp	Asn	Leu	Ser	Asn	Pro	Asp	Pro	Thr	Ser	Ser	Glu	Tyr
	850					855					860				
Ile	Thr	Leu	Leu	Arg	Asp	Ile	Gln	Asp	Lys	Val	Thr	Thr	Leu	Tyr	Lys
865					870					875					880
Gly	Ser	Gln	Leu	His	Asp	Thr	Phe	Arg	Phe	Cys	Leu	Val	Thr	Asn	Leu
				885					890					895	
Thr	Met	Asp	Ser	Val	Leu	Val	Thr	Val	Lys	Ala	Leu	Phe	Ser	Ser	Asn
			900					905						910	

Leu Asp Pro Ser Leu Val Glu Gln Val Phe Leu Asp Lys Thr Leu Asn  
 915 920 925  
 Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln Leu Val Asp Ile His  
 930 935 940  
 Val Thr Glu Met Glu Ser Ser Val Tyr Gln Pro Thr Ser Ser Ser Ser  
 945 950 955 960  
 Thr Gln His Phe Tyr Leu Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser  
 965 970 975  
 Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg  
 980 985 990  
 Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys  
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&lt;213&gt; Homo sapiens

&lt;400&gt; 50

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 Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln

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Glu Arg	Val Leu Gln Gly	Leu Leu Arg Pro Val	Phe Lys Asn Thr
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Ser Val	Gly Pro Leu Tyr	Ser Gly Cys Arg Leu	Thr Leu Leu Arg
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Pro Lys	Lys Asp Gly Ala	Ala Thr Lys Val Asp	Ala Ile Cys Thr
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Tyr Arg	Pro Asp Pro Lys	Ser Pro Gly Leu Asp	Arg Glu Gln Leu
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Tyr Trp	Glu Leu Ser Gln	Leu Thr His Ser Ile	Thr Glu Leu Gly
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Pro Tyr	Thr Gln Asp Arg	Asp Ser Leu Tyr Val	Asn Gly Phe Thr
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His Arg	Ser Ser Val Pro	Thr Thr Ser Ile Pro	Gly Thr Ser Ala
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Val His	Leu Glu Thr Ser	Gly Thr Pro Ala Ser	Leu Pro Gly Pro
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Ile Thr	Asn Leu Arg Tyr	Glu Glu Asn Met Gln	His Pro Gly Ser
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Ser Leu	Phe Lys Ser Thr	Ser Val Gly Pro Leu	Tyr Ser Gly Cys
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Ser Gly Pro Gly Leu Pro	Ile Lys Gln Val Phe	His Glu Leu Ser
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Gln Gln Thr His Gly Ile	Thr Arg Leu Gly Pro	Tyr Ser Leu Asp
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Lys Asp Ser Leu Tyr Leu	Asn Gly Tyr Asn Glu	Pro Gly Leu Asp
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Glu Pro Pro Thr Thr Pro	Lys Pro Ala Thr Thr	Phe Leu Pro Pro
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1910						1915					1920			
Arg	Asp	Ser	Leu	Phe	Ile	Asn	Gly	Tyr	Ala	Pro	Gln	Asn	Leu	Ser
1925						1930					1935			
Ile	Arg	Gly	Glu	Tyr	Gln	Ile	Asn	Phe	His	Ile	Val	Asn	Trp	Asn
1940						1945					1950			
Leu	Ser	Asn	Pro	Asp	Pro	Thr	Ser	Ser	Glu	Tyr	Ile	Thr	Leu	Leu
1955						1960					1965			
Arg	Asp	Ile	Gln	Asp	Lys	Val	Thr	Thr	Leu	Tyr	Lys	Gly	Ser	Gln
1970						1975					1980			
Leu	His	Asp	Thr	Phe	Arg	Phe	Cys	Leu	Val	Thr	Asn	Leu	Thr	Met
1985						1990					1995			
Asp	Ser	Val	Leu	Val	Thr	Val	Lys	Ala	Leu	Phe	Ser	Ser	Asn	Leu
2000						2005					2010			
Asp	Pro	Ser	Leu	Val	Glu	Gln	Val	Phe	Leu	Asp	Lys	Thr	Leu	Asn
2015						2020					2025			
Ala	Ser	Phe	His	Trp	Leu	Gly	Ser	Thr	Tyr	Gln	Leu	Val	Asp	Ile
2030						2035					2040			
His	Val	Thr	Glu	Met	Glu	Ser	Ser	Val	Tyr	Gln	Pro	Thr	Ser	Ser
2045						2050					2055			
Ser	Ser	Thr	Gln	His	Phe	Tyr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu
2060						2065					2070			
Pro	Tyr	Ser	Gln	Asp	Lys	Ala	Gln	Pro	Gly	Thr	Thr	Asn	Tyr	Gln
2075						2080					2085			
Arg	Asn	Lys	Arg	Asn	Ile	Glu	Asp	Ala	Leu	Asn	Gln	Leu	Phe	Arg
2090						2095					2100			



Asn	Ser	Ser	Ile	Lys	Ser	Tyr	Phe	Ser	Asp	Cys	Gln	Val	Ser	Thr
2105						2110					2115			
Phe	Arg	Ser	Val	Pro	Asn	Arg	His	His	Thr	Gly	Val	Asp	Ser	Leu
2120						2125					2130			
Cys	Asn	Phe	Ser	Pro	Leu	Ala	Arg	Arg	Val	Asp	Arg	Val	Ala	Ile
2135						2140					2145			
Tyr	Glu	Glu	Phe	Leu	Arg	Met	Thr	Arg	Asn	Gly	Thr	Gln	Leu	Gln
2150						2155					2160			
Asn	Phe	Thr	Leu	Asp	Arg	Ser	Ser	Val	Leu	Val	Asp	Gly	Tyr	Ser
2165						2170					2175			
Pro	Asn	Arg	Asn	Glu	Pro	Leu	Thr	Gly	Asn	Ser	Asp	Leu	Pro	Phe
2180						2185					2190			
Trp	Ala	Val	Ile	Leu	Ile	Gly	Leu	Ala	Gly	Leu	Leu	Gly	Leu	Ile
2195						2200					2205			
Thr	Cys	Leu	Ile	Cys	Gly	Val	Leu	Val	Thr	Thr	Arg	Arg	Arg	Lys
2210						2215					2220			
Lys	Glu	Gly	Glu	Tyr	Asn	Val	Gln	Gln	Gln	Cys	Pro	Gly	Tyr	Tyr
2225						2230					2235			
Gln	Ser	His	Leu	Asp	Leu	Glu	Asp	Leu	Gln					
2240						2245								

&lt;210&gt; 51

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial

&lt;220&gt;

&lt;223&gt; Synthetic Primer

&lt;400&gt; 51

cagcagagac cagcagcaggt actc

24

&lt;210&gt; 52

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial

<220>

<223> Synthetic Primer

<400> 52

tccactgccca tggctgagct

20

<210> 53

<211> 22

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 53

ccagcacagc tcttcccagg ac

22

<210> 54

<211> 22

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 54

ggaatggctg agctgacgtc tg

22

<210> 55

<211> 21

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 55

ottcccagga caacctcaag g

21

<210> 56

<211> 21

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 56

gcaggatgag tgagccacgt g

21

<210> 57

<211> 22

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 57

gtcagatctg gtgacctcac tg

22

<210> 58

<211> 21

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 58

gaggcactgg aaagcccaga g

21

<210> 59

<211> 25

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 59

ctgatggcat tatggaacac atcac

25

<210> 60

<211> 22

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 60

cccagaacga gagaccagtg ag

22

<210> 61

<211> 24

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 61

gctgatggcg atgaatgaac actg

24

<210> 62

<211> 22

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 62

cccagaacga gagaccagtg ag

22

<210> 63

<211> 35

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 63

cgcgatccg aacactgcgt ttgctggctt tgatg

35

<210> 64

<211> 23

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 64

cctctgtgtg ctgcttcatt ggg

23

<210> 65

<211> 32

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 65

accgatcca tgggccacac agagcctggc cc

32

<210> 66

<211> 29

<212> DNA

<213> Artificial

<220>

<223> Synthetic Primer

<400> 66

tgtaagctta ggcagggagg atggagtcc

29

<210> 67

<211> 507

<212> DNA

<213> Homo sapien

<400> 67

atgagaggat cgcacacca tcaccatcac ggatccatgg gccacacaga gcctggccct 60

ctcctgatac cattcacttt caactttacc atcaccaacc tgcattatga ggaaaacatg 120

caacacccctg gttccaggaa gttcaacacc acggagaggg ttctgcaggg tctgctcaag 180

cccttgttca agaacaccag tggtggccct ctgtactctg gctgcagact gaccttgctc 240

agacctgaga agcatgaggg agccactgga gtggacacca tctgtaccca ccgcgttgat 300

cccatcggac ctggactgga cagagagcgg ctatactggg agctgagcca gctgaccaac 360

agcatcacag agctgggacc ctacacccctg gacagggaca gtctctatgt caatggcttc 420

aaccctcgga gctctgtgcc aaccaccagc actcctggga cctccacagt gcacctggca 480

acctctggga ctccatcctc cctgcct 507

<210> 68

<211> 169

<212> PRT

<213> Homo sapiens

<400> 68

Met Arg Gly Ser His His His His His His Gly Ser Met Gly His Thr  
1 5 10 15

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr  
20 25 30

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe  
35 40 45

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys  
50 55 60

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu  
65 70 75 80

Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr  
85 90 95

His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr  
100 105 110

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr  
115 120 125

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser  
130 135 140

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala  
145 150 155 160

Thr Ser Gly Thr Pro Ser Ser Leu Pro  
165

<210> 69

<211> 909

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)..(909)

<223> Any "X" = any amino acid

<400> 69

Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	1	5	10	15
Val	Gly	Leu	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Lys	20	25	30	
Lys	Asp	Gly	Ala	Ala	Thr	Lys	Val	Asp	Ala	Ile	Cys	Thr	Tyr	Arg	Pro	35	40	45	
Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	50	55	60	
Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	65	70	75	80
Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	Gln	Arg	Ser	Ser	Val	Pro	85	90	95	
Thr	Thr	Ser	Ile	Pro	Gly	Thr	Pro	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	100	105	110	
Thr	Pro	Val	Ser	Lys	Pro	Gly	Pro	Ser	Ala	Ala	Ser	Pro	Leu	Leu	Ile	115	120	125	
Pro	Phe	Thr	Ile	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Arg	Tyr	Glu	Glu	Asn	130	135	140	
Met	Gly	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ile	Met	Glu	Arg	Val	Leu	145	150	155	160
Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	165	170	175	
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Lys	Lys	Asp	Gly	Ala	180	185	190	
Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	195	200	205	
Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Lys	Leu	Thr	210	215	220	
Asn	Asp	Ile	Glu	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	225	230	235	240
Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Ser	Ser	Val	Ser	Thr	Thr	Ser	Thr	245	250	255	
Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Arg	Thr	Ser	Gly	Thr	Pro	Ser	Ser	260	265	270	
Leu	Ser	Ser	Pro	Thr	Ile	Met	Ala	Ala	Gly	Pro	Leu	Leu	Ile	Pro	Phe	275	280	285	



Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn Met His  
 290 295 300  
 His Pro Gly Ser Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly  
 305 310 315 320  
 Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser  
 325 330 335  
 Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr  
 340 345 350  
 Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly  
 355 360 365  
 Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr His Gly  
 370 375 380  
 Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val  
 385 390 395 400  
 Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr Pro Gly  
 405 410 415  
 Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser Ser Pro  
 420 425 430  
 Ser Pro Thr Thr Ala Gly Pro Leu Leu Met Pro Phe Thr Leu Asn Phe  
 435 440 445  
 Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser  
 450 455 460  
 Arg Lys Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Lys Pro  
 465 470 475 480  
 Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu  
 485 490 495  
 Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala  
 500 505 510  
 Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu  
 515 520 525  
 Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu  
 530 535 540  
 Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr  
 545 550 555 560  
 His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala Val  
 565 570 575  
 His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr Ala  
 580 585 590  
 Pro Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn

595					600					605					
Leu	His	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn
610						615					620				
Thr	Met	Glu	Arg	Val	Leu	Gln	Gly	Cys	Leu	Val	Pro	Cys	Ser	Arg	Asn
625					630					635					640
Thr	Asn	Val	Gly	Leu	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg
				645					650						655
Xaa	Glu	Lys	Xaa	Xaa	Ala	Ala	Thr	Xaa	Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa
			660					665					670		
Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp
		675					680					685			
Glu	Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Thr
	690					695					700				
Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser
705					710					715					720
Val	Ala	Pro	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr
				725					730					735	
Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro	Thr	Thr	Val	Pro	Leu	Leu
			740					745					750		
Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Gly	Glu
		755				760						765			
Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
	770					775					780				
Leu	Gln	Gly	Leu	Leu	Gly	Pro	Leu	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro
785					790					795					800
Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ile	Ser	Leu	Arg	Ser	Glu	Lys	Asp	Gly
				805					810					815	
Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	His	Leu	Asn	Pro	Gln
			820					825					830		
Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Gln	Leu	Ser	Gln	Val
		835					840					845			
Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser
	850					855					860				
Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Gly	Leu	Thr	Thr	Ser
865					870					875					880
Thr	Pro	Trp	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser
				885					890					895	
Pro	Val	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Ile			
			900					905							

&lt;210&gt; 70

&lt;211&gt; 525

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 70

Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu  
1 5 10 15

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala  
20 25 30

Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn  
35 40 45

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr  
50 55 60

Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu  
65 70 75 80

Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr  
85 90 95

Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser  
100 105 110

Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Val Pro Phe Thr Leu  
115 120 125

Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Ala Met Arg His Pro  
130 135 140

Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu  
145 150 155 160

Arg Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys  
165 170 175

Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val  
180 185 190

Asp Ala Ala Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp  
195 200 205

Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr  
210 215 220

Glu Leu Gly Pro Tyr Thr Leu Asp Arg Val Ser Leu Tyr Val Asn Gly  
225 230 235 240

Phe Asn Pro Arg Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser  
245 250 255

```

Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His
      260                      265                      270

Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile
      275                      280                      285

Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys
      290                      295                      300

Phe Asn Thr Met Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe
305                      310                      315                      320

Lys Asn Thr Ser Ile Gly Pro Leu Tyr Ser Ser Cys Arg Leu Thr Leu
      325                      330                      335

Leu Arg Pro Glu Lys Asp Lys Ala Ala Thr Arg Val Asp Ala Ile Cys
      340                      345                      350

Thr His His Pro Asp Pro Gln Ser Pro Gly Leu Asn Arg Glu Gln Leu
      355                      360                      365

Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro
      370                      375                      380

Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val Asp Gly Phe Thr His Trp
385                      390                      395                      400

Ser Pro Ile Pro Thr Thr Ser Thr Pro Gly Thr Ser Ile Val Asn Leu
      405                      410                      415

Gly Thr Ser Gly Ile Pro Pro Ser Leu Pro Glu Thr Thr Ala Thr Gly
      420                      425                      430

Pro Leu Leu Ile Pro Phe Thr Pro Asn Phe Thr Ile Thr Asn Leu Gln
      435                      440                      445

Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe Asn Thr Met
      450                      455                      460

Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys Asn Ser Ser
465                      470                      475                      480

Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu
      485                      490                      495

Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro
      500                      505                      510

Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr
      515                      520                      525

<210> 71

<211> 594

<212> PRT

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&lt;213&gt; Homo sapiens

&lt;400&gt; 71

Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser		
1				5					10					15			
Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu		
			20					25					30				
Lys	Asp	Gly	Val	Ala	Thr	Arg	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Pro		
		35					40					45					
Asp	Pro	Lys	Ile	Pro	Gly	Leu	Asp	Arg	Gln	Gln	Leu	Tyr	Trp	Glu	Leu		
	50					55					60						
Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp		
65					70					75					80		
Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	Gln	Arg	Ser	Ser	Val	Pro		
				85					90					95			
Thr	Thr	Ser	Thr	Pro	Gly	Thr	Phe	Thr	Val	Gln	Pro	Glu	Thr	Ser	Glu		
			100					105					110				
Thr	Pro	Ser	Ser	Leu	Pro	Gly	Pro	Thr	Ala	Thr	Gly	Pro	Val	Leu	Leu		
		115					120					125					
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Ile	Asn	Leu	Gln	Tyr	Glu	Glu	Asp		
	130					135					140						
Met	His	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu		
145					150					155					160		
Gln	Gly	Leu	Leu	Met	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu		
				165					170					175			
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Gln	Glu	Ala		
			180					185					190				
Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Ser	Glu		
		195					200					205					
Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr		
	210					215					220						
Asn	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu		
225					230					235					240		
Tyr	Val	Asn	Gly	Phe	Thr	His	Ser	Gly	Val	Leu	Cys	Pro	Pro	Pro	Ser		
				245					250					255			
Ile	Leu	Gly	Ile	Phe	Thr	Val	Gln	Pro	Glu	Thr	Phe	Glu	Thr	Pro	Ser		
		260						265					270				
Ser	Leu	Pro	Gly	Pro	Thr	Ala	Thr	Gly	Pro	Val	Leu	Leu	Pro	Phe	Thr		
		275					280					285					

[illegible]

&lt;210&gt; 72

&lt;211&gt; 424

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 72

Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	1	5	10	15
Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Tyr	Thr	His	20	25	30	
Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	35	40	45	
Glu	Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	50	55	60	
Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Thr	Ser	65	70	75	80
Ala	Pro	Asn	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	85	90	95	
Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro	Thr	Ser	Ala	Gly	Pro	Leu	100	105	110	
Leu	Ile	Pro	Phe	Thr	Ile	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Arg	Tyr	Glu	115	120	125	
Glu	Asn	Met	His	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met	Glu	Arg	130	135	140	
Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly	145	150	155	160
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	165	170	175	
Gly	Val	Ala	Thr	Arg	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Pro	Asp	Pro	180	185	190	
Lys	Ile	Pro	Gly	Leu	Asp	Arg	Gln	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	195	200	205	
Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	210	215	220	
Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	Gln	Arg	Ser	Ser	Val	Pro	Thr	Thr	225	230	235	240

Ser Thr Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu Thr Pro  
 245 250 255  
 Ser Ser Leu Pro Gly Pro Thr Ala Thr Gly Pro Val Leu Leu Pro Phe  
 260 265 270  
 Thr Leu Asn Phe Thr Ile Ile Asn Leu Gln Tyr Glu Glu Asp Met His  
 275 280 285  
 Arg Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly  
 290 295 300  
 Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser  
 305 310 315 320  
 Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys His Gly Ala Ala Thr  
 325 330 335  
 Gly Val Asp Ala Ile Cys Thr Leu Arg Leu Asp Pro Thr Gly Pro Gly  
 340 345 350  
 Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Ser  
 355 360 365  
 Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asp Ser Leu Tyr Val  
 370 375 380  
 Asn Gly Phe Asn Pro Trp Ser Ser Val Pro Thr Thr Ser Thr Pro Gly  
 385 390 395 400  
 Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro  
 405 410 415  
 Gly His Thr Ala Pro Val Pro Leu  
 420

<210> 73

<211> 286

<212> PRT

<213> Homo sapiens

<400> 73

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser  
 1 5 10 15  
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
 20 25 30  
 Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu  
 35 40 45  
 Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
 50 55 60



Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp  
 65 70 75 80  
 Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Pro  
 85 90 95  
 Thr Thr Ser Ile Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly  
 100 105 110  
 Thr Pro Ala Ser Leu Pro Gly His Thr Ala Pro Gly Pro Leu Leu Val  
 115 120 125  
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp  
 130 135 140  
 Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
 145 150 155 160  
 Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu  
 165 170 175  
 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Arg Gly Ala  
 180 185 190  
 Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Leu Asp Pro Leu Asn  
 195 200 205  
 Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr  
 210 215 220  
 Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu Leu Asp Arg Gly Ser Leu  
 225 230 235 240  
 Tyr Val Asn Gly Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr  
 245 250 255  
 Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser  
 260 265 270  
 Leu Pro Arg Pro Ile Val Pro Gly Pro Leu Leu Ile Pro Phe  
 275 280 285

<210> 74

<211> 286

<212> PRT

<213> Homo sapiens

<400> 74

Glu Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser  
 1 5 10 15  
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys

20					25					30					
Lys	Asp	Gly	Ala	Ala	Thr	Lys	Val	Asp	Ala	Ile	Cys	Thr	Tyr	Arg	Pro
		35					40					45			
Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu
	50					55					60				
Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp
65					70					75					80
Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	Gln	Arg	Ser	Ser	Val	Pro
				85					90					95	
Thr	Thr	Ser	Ile	Pro	Gly	Thr	Pro	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly
			100					105					110		
Thr	Pro	Val	Ser	Lys	Pro	Gly	Pro	Ser	Ala	Ala	Ser	Pro	Leu	Leu	Val
		115					120					125			
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp
	130					135					140				
Met	His	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ala	Thr	Glu	Arg	Val	Leu
145					150					155					160
Gln	Gly	Leu	Leu	Ser	Pro	Ile	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu
				165					170					175	
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala
			180					185					190		
Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu	Tyr	His	Pro	Asn	Pro	Lys	Arg
		195					200					205			
Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr
	210					215					220				
His	Asn	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Ser	Leu	Asp	Arg	Asp	Ser	Leu
225					230					235					240
Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Ser	Ser	Met	Thr	Thr	Thr	Arg	Thr
				245					250					255	
Pro	Asp	Thr	Ser	Thr	Met	His	Leu	Ala	Thr	Ser	Arg	Thr	Pro	Ala	Ser
			260					265					270		
Leu	Ser	Gly	Pro	Thr	Thr	Ala	Ser	Pro	Leu	Leu	Ile	Pro	Phe		
		275					280					285			

&lt;210&gt; 75

&lt;211&gt; 286

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 75

Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	
1				5					10					15		
Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	
			20					25					30			
Lys	Arg	Gly	Ala	Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Leu	
		35					40					45				
Asp	Pro	Leu	Asn	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	
	50					55					60					
Ser	Lys	Leu	Thr	Arg	Gly	Ile	Ile	Glu	Leu	Gly	Pro	Tyr	Leu	Leu	Asp	
65					70					75					80	
Arg	Gly	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Ser	Arg	Gln	Ser	Ser	Met	Thr	
				85					90					95		
Thr	Thr	Arg	Thr	Pro	Asp	Thr	Ser	Thr	Met	His	Leu	Ala	Thr	Ser	Arg	
			100					105					110			
Thr	Pro	Ala	Ser	Leu	Ser	Gly	Pro	Thr	Thr	Ala	Ser	Pro	Leu	Leu	Ile	
		115					120					125				
Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asn	
	130					135					140					
Met	Gly	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ile	Met	Glu	Arg	Val	Leu	
145					150					155					160	
Gln	Gly	Leu	Leu	Asn	Pro	Ile	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	
				165					170					175		
Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Lys	Pro	Glu	Lys	Asp	Gly	Ala	
			180					185					190			
Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu	Tyr	His	Pro	Asn	Pro	Lys	Arg	
		195					200					205				
Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	
		210				215					220					
His	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	
225					230					235					240	
Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val	Ala	Pro	Thr	Ser	Thr	
				245					250					255		
Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	
			260					265					270			
Leu	Pro	Ser	Pro	Thr	Thr	Ala	Val	Pro	Leu	Leu	Ile	Pro	Phe			
		275					280					285				

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&lt;210&gt; 76

&lt;211&gt; 286

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 76

Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser  
1 5 10 15

Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu  
20 25 30

Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro  
35 40 45

Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu  
50 55 60

Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp  
65 70 75 80

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Gly Leu  
85 90 95

Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly  
100 105 110

Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Ile  
115 120 125

Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn  
130 135 140

Met Gly His Pro Gly Ser Arg Lys Phe Asn Ile Met Glu Arg Val Leu  
145 150 155 160

Gln Gly Leu Leu Met Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu  
165 170 175

Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala  
180 185 190

Ala Thr Arg Val Asp Ala Val Cys Thr Gln Arg Pro Asp Pro Lys Ser  
195 200 205

Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Lys Leu Ser Gln Leu Thr  
210 215 220

His Gly Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp Arg His Ser Leu  
225 230 235 240

Tyr Val Asn Gly Leu Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr  
245 250 255

Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr

210                      215                      220  
 Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu  
 225                      230                      235                      240  
 Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr  
                     245                      250                      255  
 Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser  
                     260                      265                      270  
 Leu Ser Ser Pro Thr Ile Met Ala Ala Gly Pro Leu Leu Ile Pro Phe  
                     275                      280                      285  
  
 <210> 78  
 <211> 597  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 78  
 Glu Arg Val Leu His Gly Leu Leu Thr Pro Leu Phe Lys Asn Thr Arg  
 1                      5                      10                      15  
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu  
                     20                      25                      30  
 Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val  
                     35                      40                      45  
 Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu  
                     50                      55                      60  
 Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr Leu Asp  
 65                      70                      75                      80  
 Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro  
                     85                      90                      95  
 Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly  
                     100                      105                      110  
 Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile  
                     115                      120                      125  
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn  
                     130                      135                      140  
 Met Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
 145                      150                      155                      160  
 Gln Gly Leu Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu  
                     165                      170                      175

Tyr	Ser	Gly	Cys 180	Arg	Leu	Thr	Leu	Phe 185	Lys	Pro	Glu	Lys	His 190	Glu	Ala
Ala	Thr	Gly 195	Val	Asp	Ala	Ile	Cys 200	Thr	Leu	Arg	Leu	Asp 205	Pro	Thr	Gly
Pro	Gly 210	Leu	Asp	Arg	Gln	Leu 215	Tyr	Trp	Glu	Leu	Ser 220	Gln	Leu	Thr	Asn
Ser 225	Val	Thr	Glu	Leu	Gly 230	Pro	Tyr	Thr	Leu	Asp 235	Arg	Asp	Ser	Leu	Tyr 240
Val	Asn	Gly	Phe	Thr 245	His	Arg	Ser	Ser	Val 250	Pro	Thr	Thr	Ser	Ile 255	Pro
Gly	Thr	Ser	Ala 260	Val	His	Leu	Glu	Thr 265	Ser	Gly	Thr	Pro	Ala 270	Ser	Leu
Pro	Gly	His 275	Thr	Ala	Pro	Gly	Pro 280	Leu	Leu	Ile	Pro	Phe 285	Thr	Leu	Asn
Phe	Thr 290	Ile	Thr	Asn	Leu	Gln 295	Tyr	Glu	Glu	Asp 300	Met	Arg	Arg	Thr	Gly
Ser 305	Arg	Lys	Phe	Asn	Thr 310	Met	Glu	Arg	Val	Leu 315	Gln	Gly	Leu	Leu	Lys 320
Pro	Leu	Phe	Lys	Ser 325	Thr	Ser	Val	Gly	Pro 330	Leu	Tyr	Ser	Gly	Cys 335	Arg
Leu	Thr	Leu	Leu 340	Arg	Pro	Glu	Lys	Arg 345	Gly	Ala	Ala	Thr	Gly 350	Val	Asp
Thr	Ile	Cys 355	Thr	His	Arg	Leu	Asp 360	Pro	Leu	Asn	Pro	Gly 365	Leu	Asp	Arg
Glu	Gln 370	Leu	Tyr	Trp	Glu	Leu 375	Ser	Lys	Leu	Thr	Arg 380	Gly	Ile	Ile	Glu
Leu 385	Gly	Pro	Tyr	Leu	Leu 390	Asp	Arg	Gly	Ser	Leu 395	Tyr	Val	Asn	Gly	Phe 400
Thr	His	Arg	Asn 405	Phe	Val	Pro	Ile	Thr	Ser 410	Thr	Pro	Gly	Thr	Ser 415	Thr
Val	His	Leu	Gly 420	Thr	Ser	Glu	Thr	Pro 425	Ser	Ser	Leu	Pro	Arg 430	Pro	Ile
Val	Pro	Gly 435	Pro	Leu	Leu	Ile	Pro 440	Phe	Thr	Ile	Asn	Phe 445	Thr	Ile	Thr
Asn	Leu 450	Arg	Tyr	Glu	Glu	Asn 455	Met	His	His	Pro	Gly 460	Ser	Arg	Lys	Phe
Asn 465	Ile	Met	Glu	Arg	Val 470	Leu	Gln	Gly	Leu	Leu 475	Gly	Pro	Leu	Phe	Lys 480
Asn	Ser	Ser	Val	Gly 485	Pro	Leu	Tyr	Ser	Gly 490	Cys	Arg	Leu	Ile	Ser 495	Leu

Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr  
 500 505 510  
 His His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr  
 515 520 525  
 Trp Gln Leu Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr  
 530 535 540  
 Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser  
 545 550 555 560  
 Ser Gly Leu Thr Thr Ser Thr Pro Trp Thr Ser Thr Val Asp Leu Gly  
 565 570 575  
 Thr Ser Gly Thr Pro Ser Pro Val Pro Ser Pro Thr Thr Ala Gly Pro  
 580 585 590  
 Leu Leu Ile Pro Phe  
 595  
 <210> 79  
 <211> 420  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 79  
 Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys  
 1 5 10 15  
 Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn  
 20 25 30  
 Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser  
 35 40 45  
 Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg  
 50 55 60  
 Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr  
 65 70 75 80  
 Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr  
 85 90 95  
 Pro Ser Ser Phe Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro  
 100 105 110  
 Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asn Met  
 115 120 125  
 Gly His Pro Gly Ser Arg Lys Phe Asn Ile Thr Glu Ser Val Leu Gln



130		135		140
Gly 145	Leu 146	Leu 147	Thr 148	Pro 149
		Leu 150	Phe 151	Lys 152
			Asn 153	Ser 154
			Ser 155	Val 156
			Gly 157	Pro 158
			Leu 159	Tyr 160
Ser 161	Gly 162	Cys 163	Arg 164	Leu 165
		Ile 166	Ser 167	Leu 168
			Arg 169	Ser 170
			Glu 171	Lys 172
			Asp 173	Gly 174
			Ala 175	Ala 176
Thr 177	Gly 178	Val 179	Asp 180	Ala 181
		Ile 182	Cys 183	Thr 184
			His 185	His 186
			Leu 187	Asn 188
			Pro 189	Gln 190
Gly 191	Leu 192	Asp 193	Arg 194	Glu 195
				Gln 196
				Leu 197
				Tyr 198
				Trp 199
				Gln 200
				Leu 201
				Ser 202
				Gln 203
				Met 204
				Thr 205
				Asn 206
Gly 207	Ile 208	Lys 209	Glu 210	Leu 211
				Gly 212
				Pro 213
				Tyr 214
				Thr 215
				Leu 216
				Asp 217
				Arg 218
				Asp 219
				Ser 220
				Leu 221
				Tyr 222
Val 223	Asn 224	Gly 225	Phe 226	Thr 227
				His 228
				Arg 229
				Ser 230
				Leu 231
				Gly 232
				Leu 233
				Thr 234
				Thr 235
				Ser 236
				Thr 237
				Pro 238
				Pro 239
				Val 240
Trp 241	Thr 242	Ser 243	Thr 244	Val 245
				Asp 246
				Leu 247
				Gly 248
				Thr 249
				Ser 250
				Gly 251
				Thr 252
				Pro 253
				Ser 254
				Pro 255
				Val 256
Pro 257	Ser 258	Pro 259	Thr 260	Thr 261
				Ala 262
				Gly 263
				Pro 264
				Leu 265
				Leu 266
				Ile 267
				Pro 268
				Phe 269
				Thr 270
				Leu 271
				Asn 272
Phe 273	Thr 274	Ile 275	Thr 276	Asn 277
				Leu 278
				Gln 279
				Tyr 280
				Glu 281
				Glu 282
				Asn 283
				Met 284
				Gly 285
				His 286
				Pro 287
				Gly 288
Ser 289	Arg 290	Lys 291	Phe 292	Asn 293
				Ile 294
				Met 295
				Glu 296
				Arg 297
				Val 298
				Leu 299
				Gln 300
				Gly 301
				Leu 302
				Leu 303
				Arg 304
Pro 305	Val 306	Phe 307	Lys 308	Asn 309
				Thr 310
				Ser 311
				Val 312
				Gly 313
				Pro 314
				Leu 315
				Tyr 316
				Ser 317
				Gly 318
				Cys 319
				Arg 320
Leu 321	Thr 322	Leu 323	Leu 324	Arg 325
				Pro 326
				Lys 327
				Lys 328
				Asp 329
				Gly 330
				Ala 331
				Ala 332
				Thr 333
				Lys 334
				Val 335
				Asp 336
Ala 337	Ile 338	Cys 339	Thr 340	Tyr 341
				Arg 342
				Pro 343
				Asp 344
				Pro 345
				Lys 346
				Ser 347
				Pro 348
				Gly 349
				Leu 350
				Asp 351
				Arg 352
Glu 353	Gln 354	Leu 355	Tyr 356	Trp 357
				Glu 358
				Leu 359
				Ser 360
				Gln 361
				Leu 362
				Thr 363
				His 364
				Ser 365
				Ile 366
				Thr 367
				Glu 368
Leu 369	Gly 370	Pro 371	Tyr 372	Thr 373
				Leu 374
				Asp 375
				Arg 376
				Asp 377
				Ser 378
				Leu 379
				Tyr 380
				Val 381
				Asn 382
				Gly 383
				Phe 384
Thr 385	Gln 386	Arg 387	Ser 388	Ser 389
				Val 390
				Pro 391
				Thr 392
				Thr 393
				Ser 394
				Ile 395
				Pro 396
				Gly 397
				Thr 398
				Pro 399
				Thr 400
Val 401	Asp 402	Leu 403	Gly 404	Thr 405
				Ser 406
				Gly 407
				Thr 408
				Pro 409
				Val 410
				Ser 411
				Lys 412
				Pro 413
				Gly 414
				Pro 415
				Ser 416
Ala 417	Ala 418	Ser 419	Pro 420	

&lt;210&gt; 80

&lt;211&gt; 479

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 80

Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu  
1 5 10 15

Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr  
20 25 30

His Gln Ser Ser Val Ser Thr Thr Ser Thr Pro Gly Thr Ser Thr Val  
35 40 45

Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser Leu Ser Ser Pro Thr Ile  
50 55 60

Met Ala Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile  
65 70 75 80

Thr Asn Leu Gln Tyr Glu Glu Asn Met Gly His Pro Gly Ser Arg Lys  
85 90 95

Phe Asn Ile Met Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe  
100 105 110

Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu  
115 120 125

Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys  
130 135 140

Ser His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu  
145 150 155 160

Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro  
165 170 175

Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg  
180 185 190

Ser Ser Val Ala Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu  
195 200 205

Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val  
210 215 220

Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys  
225 230 235 240

Tyr Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr  
245 250 255

Glu Arg Val Leu Gln Ser Leu Phe Gly Pro Met Phe Lys Asn Thr Ser

<210> 81

<212> DNA

<213> Homo sapiens

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 aaatgatgat cacaacccca tatgttttcc ctgatgttcc agaaacgaca tcttcattgg 420  
 ctaccagcct gggagcagaa accagcacag ctcttcccag gacaacccca tctgttctca 480  
 atagagaatc agagaccaca gcctcactgg tctctcgttc tggggcagag agaagtccgg 540  
 ttattcaaac tctagatggt tcttctagtg agccagatac aacagcttca tgggttatcc 600  
 atcctgcaga gaccatccca actgtttcca agacaacccc caattttttc cacagtgaat 660  
 tagacactgt atcttccaca gccaccagtc atggggcaga cgtcagctca gccattccaa 720  
 caaatatctc acctagtga ctagatgcac tgacccact ggtcactatt tcggggacag 780  
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&lt;210&gt; 82

&lt;211&gt; 1821

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 82

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20 25 30

Lys Ile Pro Asn Glu Ala Ala His Arg Gly Thr Ile Arg Pro Val Lys  
35 40 45

Gly Pro Gln Thr Ser Thr Ser Pro Ala Ser Pro Lys Gly Leu His Thr  
50 55 60

Gly Gly Thr Lys Arg Met Glu Thr Thr Thr Thr Ala Leu Lys Thr Thr  
65 70 75 80

Thr Thr Ala Leu Lys Thr Thr Ser Arg Ala Thr Leu Thr Thr Ser Val  
85 90 95

Tyr Thr Pro Thr Leu Gly Thr Leu Thr Pro Leu Asn Ala Ser Arg Gln  
100 105 110

Met Ala Ser Thr Ile Leu Thr Glu Met Met Ile Thr Thr Pro Tyr Val  
115 120 125

Phe Pro Asp Val Pro Glu Thr Thr Ser Ser Leu Ala Thr Ser Leu Gly  
130 135 140

Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr Pro Ser Val Leu Asn  
145 150 155 160

Arg Glu Ser Glu Thr Thr Ala Ser Leu Val Ser Arg Ser Gly Ala Glu  
165 170 175

Arg Ser Pro Val Ile Gln Thr Leu Asp Val Ser Ser Ser Glu Pro Asp  
180 185 190

Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu Thr Ile Pro Thr Val  
195 200 205

Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu Leu Asp Thr Val Ser  
210 215 220

Ser Thr Ala Thr Ser His Gly Ala Asp Val Ser Ser Ala Ile Pro Thr  
225 230 235 240

Asn Ile Ser Pro Ser Glu Leu Asp Ala Leu Thr Pro Leu Val Thr Ile

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Ser	Gly	Thr	Asp	Thr	Ser	Thr	Thr	Phe	Pro	Thr	Leu	Thr	Lys	Ser	Pro
			260					265					270		
His	Glu	Thr	Glu	Thr	Arg	Thr	Thr	Trp	Leu	Thr	His	Pro	Ala	Glu	Thr
		275					280					285			
Ser	Ser	Thr	Ile	Pro	Arg	Thr	Ile	Pro	Asn	Phe	Ser	His	His	Glu	Ser
	290					295					300				
Asp	Ala	Thr	Pro	Ser	Ile	Ala	Thr	Ser	Pro	Gly	Ala	Glu	Thr	Ser	Ser
305					310					315					320
Ala	Ile	Pro	Ile	Met	Thr	Val	Ser	Pro	Gly	Ala	Glu	Asp	Leu	Val	Thr
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Ser	Gln	Val	Thr	Ser	Ser	Gly	Thr	Asp	Arg	Asn	Met	Thr	Ile	Pro	Thr
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Leu	Thr	Leu	Ser	Pro	Gly	Glu	Pro	Lys	Thr	Ile	Ala	Ser	Leu	Val	Thr
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	370					375					380				
Pro	Ala	Val	Ser	Arg	Leu	Val	Thr	Ser	Met	Val	Thr	Ser	Leu	Ala	Ala
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Lys	Thr	Ser	Thr	Thr	Asn	Arg	Ala	Leu	Thr	Asn	Ser	Pro	Gly	Glu	Pro
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Ala	Thr	Thr	Val	Ser	Leu	Val	Thr	His	Pro	Ala	Gln	Thr	Ser	Pro	Thr
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Val	Pro	Trp	Thr	Thr	Ser	Ile	Phe	Phe	His	Ser	Lys	Ser	Asp	Thr	Thr
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Pro	Ser	Met	Thr	Thr	Ser	His	Gly	Ala	Glu	Ser	Ser	Ser	Ala	Val	Pro
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Thr	Pro	Thr	Val	Ser	Thr	Glu	Val	Pro	Gly	Val	Val	Thr	Pro	Leu	Val
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Thr	Ser	Ser	Arg	Ala	Val	Ile	Ser	Thr	Thr	Ile	Pro	Ile	Leu	Thr	Leu
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Ser	Pro	Gly	Glu	Pro	Glu	Thr	Thr	Pro	Ser	Met	Ala	Thr	Ser	His	Gly
			500					505					510		
Glu	Glu	Ala	Ser	Ser	Ala	Ile	Pro	Thr	Pro	Thr	Val	Ser	Pro	Gly	Val
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Pro	Gly	Val	Val	Thr	Ser	Leu	Val	Thr	Ser	Ser	Arg	Ala	Val	Thr	Ser
	530					535					540				
Thr	Thr	Ile	Pro	Ile	Leu	Thr	Phe	Ser	Leu	Gly	Glu	Pro	Glu	Thr	Thr
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Pro Ser Met Ala Thr Ser His Gly Thr Glu Ala Gly Ser Ala Val Pro  
 565 570 575  
 Thr Val Leu Pro Glu Val Pro Gly Met Val Thr Ser Leu Val Ala Ser  
 580 585 590  
 Ser Arg Ala Val Thr Ser Thr Thr Leu Pro Thr Leu Thr Leu Ser Pro  
 595 600 605  
 Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu  
 610 615 620  
 Ala Ser Ser Thr Val Pro Thr Val Ser Pro Glu Val Pro Gly Val Val  
 625 630 635 640  
 Thr Ser Leu Val Thr Ser Ser Ser Gly Val Asn Ser Thr Ser Ile Pro  
 645 650 655  
 Thr Leu Ile Leu Ser Pro Gly Glu Leu Glu Thr Thr Pro Ser Met Ala  
 660 665 670  
 Thr Ser His Gly Ala Glu Ala Ser Ser Ala Val Pro Thr Pro Thr Val  
 675 680 685  
 Ser Pro Gly Val Ser Gly Val Val Thr Pro Leu Val Thr Ser Ser Arg  
 690 695 700  
 Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Leu Ser Ser Ser Glu  
 705 710 715 720  
 Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Val Glu Ala Ser  
 725 730 735  
 Ser Ala Val Leu Thr Val Ser Pro Glu Val Pro Gly Met Val Thr Ser  
 740 745 750  
 Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Thr Leu  
 755 760 765  
 Thr Ile Ser Ser Asp Glu Pro Glu Thr Thr Thr Ser Leu Val Thr His  
 770 775 780  
 Ser Glu Ala Lys Met Ile Ser Ala Ile Pro Thr Leu Ala Val Ser Pro  
 785 790 795 800  
 Thr Val Gln Gly Leu Val Thr Ser Leu Val Thr Ser Ser Gly Ser Glu  
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 Thr Ser Ala Phe Ser Asn Leu Thr Val Ala Ser Ser Gln Pro Glu Thr  
 820 825 830  
 Ile Asp Ser Trp Val Ala His Pro Gly Thr Glu Ala Ser Ser Val Val  
 835 840 845  
 Pro Thr Leu Thr Val Ser Thr Gly Glu Pro Phe Thr Asn Ile Ser Leu  
 850 855 860  
 Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu Pro Arg Thr Thr Ser  
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Arg	Phe	Ser	His	Ser	Glu	Leu	Asp	Thr	Met	Pro	Ser	Thr	Val	Thr	Ser	
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Pro	Glu	Ala	Glu	Ser	Ser	Ser	Ala	Ile	Ser	Thr	Thr	Ile	Ser	Pro	Gly	
			900					905					910			
Ile	Pro	Gly	Val	Leu	Thr	Ser	Leu	Val	Thr	Ser	Ser	Gly	Arg	Asp	Ile	
		915					920					925				
Ser	Ala	Thr	Phe	Pro	Thr	Val	Pro	Glu	Ser	Pro	His	Glu	Ser	Glu	Ala	
	930					935					940					
Thr	Ala	Ser	Trp	Val	Thr	His	Pro	Ala	Val	Thr	Ser	Thr	Thr	Val	Pro	
945					950					955					960	
Arg	Thr	Thr	Pro	Asn	Tyr	Ser	His	Ser	Glu	Pro	Asp	Thr	Thr	Pro	Ser	
				965					970					975		
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			980					985					990			
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	1070					1075					1080					
Glu	Thr	Thr	Ala	Ile	Gln	Leu	Ile	His	Pro	Ala	Glu	Thr	Asn	Thr		
	1085					1090					1095					
Met	Val	Pro	Arg	Thr	Thr	Pro	Lys	Phe	Ser	His	Ser	Lys	Ser	Asp		
	1100					1105					1110					
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Ser	Ala	Val	Ser	Thr	Thr	Thr	Ile	Ser	Pro	Asp	Met	Ser	Asp	Leu		
	1130					1135					1140					
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	1145					1150					1155					
Phe	Pro	Thr	Leu	Ser	Glu	Thr	Pro	Tyr	Glu	Pro	Glu	Thr	Thr	Ala		
	1160					1165					1170					
Thr	Trp	Leu	Thr	His	Pro	Ala	Glu	Thr	Ser	Thr	Thr	Val	Ser	Gly		

1175	1180	1185
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Met Val Thr Ser Pro Gly Val Asp Thr Arg Ser Gly Val Pro Thr 1205 1210 1215		
Thr Thr Ile Pro Pro Ser Ile Pro Gly Val Val Thr Ser Gln Val 1220 1225 1230		
Thr Ser Ser Ala Thr Asp Thr Ser Thr Ala Ile Pro Thr Leu Thr 1235 1240 1245		
Pro Ser Pro Gly Glu Pro Glu Thr Thr Ala Ser Ser Ala Thr His 1250 1255 1260		
Pro Gly Thr Gln Thr Gly Phe Thr Val Pro Ile Arg Thr Val Pro 1265 1270 1275		
Ser Ser Glu Pro Asp Thr Met Ala Ser Trp Val Thr His Pro Pro 1280 1285 1290		
Gln Thr Ser Thr Pro Val Ser Arg Thr Thr Ser Ser Phe Ser His 1295 1300 1305		
Ser Ser Pro Asp Ala Thr Pro Val Met Ala Thr Ser Pro Arg Thr 1310 1315 1320		
Glu Ala Ser Ser Ala Val Leu Thr Thr Ile Ser Pro Gly Ala Pro 1325 1330 1335		
Glu Met Val Thr Ser Gln Ile Thr Ser Ser Gly Ala Ala Thr Ser 1340 1345 1350		
Thr Thr Val Pro Thr Leu Thr His Ser Pro Gly Met Pro Glu Thr 1355 1360 1365		
Thr Ala Leu Leu Ser Thr His Pro Arg Thr Glu Thr Ser Lys Thr 1370 1375 1380		
Phe Pro Ala Ser Thr Val Phe Pro Gln Val Ser Glu Thr Thr Ala 1385 1390 1395		
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Ser Arg Val Asp Leu Ser Pro Thr Ala Ser Pro Gly Val Ser Ala 1430 1435 1440		
Lys Thr Ala Pro Leu Ser Thr His Pro Gly Thr Glu Thr Ser Thr 1445 1450 1455		
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1490						1495					1500			
Ser	Ile	Thr	Thr	Asp	Lys	Pro	Gln	Thr	Val	Thr	Ser	Trp	Asn	Thr
1505						1510					1515			
Glu	Thr	Ser	Pro	Ser	Val	Thr	Ser	Val	Gly	Pro	Pro	Glu	Phe	Ser
1520						1525					1530			
Arg	Thr	Val	Thr	Gly	Thr	Thr	Met	Thr	Leu	Ile	Pro	Ser	Glu	Met
1535						1540					1545			
Pro	Thr	Pro	Pro	Lys	Thr	Ser	His	Gly	Glu	Gly	Val	Ser	Pro	Thr
1550						1555					1560			
Thr	Ile	Leu	Arg	Thr	Thr	Met	Val	Glu	Ala	Thr	Asn	Leu	Ala	Thr
1565						1570					1575			
Thr	Gly	Ser	Ser	Pro	Thr	Val	Ala	Lys	Thr	Thr	Thr	Thr	Phe	Asn
1580						1585					1590			
Thr	Leu	Ala	Gly	Ser	Leu	Phe	Thr	Pro	Leu	Thr	Thr	Pro	Gly	Met
1595						1600					1605			
Ser	Thr	Leu	Ala	Ser	Glu	Ser	Val	Thr	Ser	Arg	Thr	Ser	Tyr	Asn
1610						1615					1620			
His	Arg	Ser	Trp	Ile	Ser	Thr	Thr	Ser	Ser	Tyr	Asn	Arg	Arg	Tyr
1625						1630					1635			
Trp	Thr	Pro	Ala	Thr	Ser	Thr	Pro	Val	Thr	Ser	Thr	Phe	Ser	Pro
1640						1645					1650			
Gly	Ile	Ser	Thr	Ser	Ser	Ile	Pro	Ser	Ser	Thr	Ala	Ala	Thr	Val
1655						1660					1665			
Pro	Phe	Met	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu
1670						1675					1680			
Gln	Tyr	Glu	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn
1685						1690					1695			
Ala	Thr	Glu	Arg	Glu	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Arg
1700						1705					1710			
Asn	Ser	Ser	Leu	Glu	Tyr	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ala	Ser
1715						1720					1725			
Leu	Arg	Pro	Glu	Lys	Asp	Ser	Ser	Ala	Met	Ala	Val	Asp	Ala	Ile
1730						1735					1740			
Cys	Thr	His	Arg	Pro	Asp	Pro	Glu	Asp	Leu	Gly	Leu	Asp	Arg	Glu
1745						1750					1755			
Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Asn	Leu	Thr	Asn	Gly	Ile	Gln	Glu
1760						1765					1770			

Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
 1775 1780 1785

Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr Pro Gly Thr  
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Ser Pro Thr  
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 ctagcctcac tcaggccaga gaaggatagc tcagccatgg cagtggatgc catctgcata 240  
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 aatctgacaa atggcatcca ggagctgggc ccctacaccc tggaccggaa cagtctctat 360  
 gtcaatgggt tcacccatcg aagctctatg cccaccacca gcaactcctgg gacctccaca 420  
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 ggtctgctca agcccttggt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
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caccgccttg accccaaaag ccctggactc aacagggagc agctgtactg ggagctaagc 300  
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 gtcaatgggtt tcacccatca gagctctgtg tccaccacca gcactcctgg gacctccaca 420  
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<211> 468

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 ggtctgcttg gtcccatatt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgacctctc tcaggtctga gaaggatgga gcagccactg gagtggatgc catctgcac 240  
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 caactgacca atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat 360  
 gtcaatgggtt tcacccatcg gacctctgtg cccaccacca gcactcctgg gacctccaca 420  
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<210> 86

<211> 465

<212> DNA

<213> Homo sapiens

<400> 86  
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 actctgcttg gtcctatgtt caagaacacc agtggtggcc ttctgtactc tggctgcaga 180  
 ctgaccttgc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc 240  
 caccgtcttg accccaaaag ccctggactg gacagagagc agctatactg ggagctgagc 300

cagctgacca atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat 360  
 gtcaatgggtt tcacccattg gatccctgtg cccaccagca gcactcctgg gacctccaca 420  
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<210> 87

<211> 468

<212> DNA

<213> Homo sapiens

<400> 87  
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 ggtctgcttg gtcccatgtt caagaacacc agtgtcggcc ttctgtactc tggctgcaga 180  
 ctgaccttgc tcagggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc 240  
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 cagctgacca atggcatcaa agagctgggt ccctacaccc tggacagaaa cagtctctat 360  
 gtcaatgggtt tcacccatca gacctctgcg cccaacacca gcactcctgg gacctccaca 420  
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<210> 88

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 88  
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ggtctgctnn nccccntntt caagaacacc agtgttg gcc ctctgtactc tggctgcaga 180  
 ctgaccttgc tcaggtccga gaaggatgga gcagccactg gaggatgc catctgcacc 240  
 caccgtcttg accccaaaag ccctggagt gacagggagc agctatactg ggagctgagc 300  
 cagctgacca atggcatcaa agagctgggt ccctacaccc tggacagaaa cagtctctat 360  
 gtcaatgggt tcacccatca gacctctgcg cccaacacca gacctcctgg gacctccaca 420  
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<210> 89

<211> 468

<212> DNA

<213> Homo sapiens

<400> 89  
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 ggtctgcttg gtcccatgtt caagaacacc agtgtcg gcc ttctgtactc tggctgcaga 180  
 ctgaccttgc tcaggcctga gaagaatggg gcagccactg gaaggatgc catctgcagc 240  
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 cagctgaccc atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat 360  
 gtcaatgggt tcacccatcg gagctctgtg gccccacca gacctcctgg gacctccaca 420  
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<210> 90

<211> 468

<212> DNA

<213> Homo sapiens

<400> 90  
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 ggtctgcttg gtcccttgtt caagaactcc agtgtcg gcc ctctgtactc tggctgcaga 180



ctgatctctc tcaggtctga gaaggatggg gcagccactg gaggatgac catctgcacc 240  
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 cagatgacca atggcatcaa agagctgggc ccctacaccc tggaccggaa cagtctctac 360  
 gtcaatgggt tcacccatcg gagctctggg ctcaccacca gactccttg gacttccaca 420  
 gttgaccttg gaacctcagg gactccatcc cccgtcccca gcccacaca 468

<210> 91

<211> 468

<212> DNA

<213> Homo sapiens

<400> 91  
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 ggtctgctta gtcccatttt caagaactcc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgacctctc tcaggcccga gaaggatggg gcagcaactg gaatggatgc tgtctgcctc 240  
 taccacccta atcccaaaag acctggactg gacagagagc agctgtactg ggagctaagc 300  
 cagctgaccc acaacatcac tgagctgggc ccctacagcc tggacaggga cagtctctat 360  
 gtcaatgggt tcacccatca gaactctgtg cccaccacca gtactcctgg gacctccaca 420  
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<210> 92

<211> 468

<212> DNA

<213> Homo sapiens

<400> 92  
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 ggtctgctca agcccttggt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgacctctc tcaggcccga gaaggatggg gcagcaactg gaatggatgc tgtctgcctc 240  
 taccacccta atcccaaaag acctgggctg gacagagagc agctgtactg ggagctaagc 300

cagctgaccc acaacatcac tgagctgggc ccctacagcc tggacagga cagtctctat 360  
 gtcaatgggt tcacccatca gaactctgtg cccaccacca gtactcctgg gacctccaca 420  
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<210> 93

<211> 468

<212> DNA

<213> Homo sapiens

<400> 93  
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 ggtctgctca agcccttggt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgaccttgc tcagacctga gaagcatgag gcagccactg gaggggacac catctgtacc 240  
 caccgcgttg atcccatcgg acctggactg gacagggagc ggctatactg ggagctgagc 300  
 cagctgacca acagcattac cgaactggga ccctacaccc tggacagga cagtctctat 360  
 gtcaatgggt tcaaccctcg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420  
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<210> 94

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 94  
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 ctgaccttgc tcagacctga gaagcatgag gcagccactg gagtggacac catctgtacc 240  
 caccgcgttg atcccatcgg acctggactg nacagngagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatgggtt tcacccatcn ganctctgng cccaccacca gactcctgg gacctccaca 420  
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<210> 95

<211> 468

<212> DNA

<213> Homo sapiens

<400> 95

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 ggtctgcttg gtcccatggt caagaacacc agtgtcgcc ttctgtactc tggctgcaga 180  
 ctgaccttgc tcaggcctga gaagaatggg gcagccactg gaatggatgc catctgcagc 240  
 caccgtcttg accccaaaag ccctggactc gacagagagc agctgtactg ggagctgagc 300  
 cagctgaccc atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat 360  
 gtcaatgggtt tcacccatcg gagctctgtg gccccacca gactcctgg gacctccaca 420  
 gtggaccttg ggacctcagg gactccatcc tcctcccca gccccaca 468

<210> 96

<211> 468

<212> DNA

<213> Homo sapiens

<400> 96

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 ggtctgcttg gtcccttggt caagaactcc agtgtcgcc ctctgtactc tggctgcaga 180

ctgatctctc tcaggtctga gaaggatggg gcagccactg gagtggatgc catctgcacc 240  
 caccacctta accctcaaag ccctggactg gacagggagc agctgtactg gcagctgagc 300  
 cagatgacca atggcatcaa agagctgggc ccctacaccc tggaccggaa cagtctctac 360  
 gtcaatgggtt tcacccatcg gagctctggg ctcaccacca gcactccttg gacttccaca 420  
 gttgaccttg gaacctcagg gactccatcc cccgtcccca gccccaca 468

<210> 97

<211> 468

<212> DNA

<213> Homo sapiens

<400> 97  
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 ggtctgctta gtcccatatt caagaactcc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgacctctc tcaggcccga gaaggatggg gcagcaactg gaatggatgc tgtctgcctc 240  
 taccacccta atcccaaaag acctggactg gacagagagc agctgtactg ggagctaagc 300  
 cagctgaccc acaacatcac tgagctgggc ccctacagcc tggacaggga cagtctctat 360  
 gtcaatgggtt tcacccatca gagctctatg acgaccacca gaactcctga tacctccaca 420  
 atgcacctgg caacctcgag aactccagcc tcctgtctg gacctacg 468

<210> 98

<211> 474

<212> DNA

<213> Homo sapiens

<400> 98  
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 ggtctgctca agcccttggt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
 ttgaccttgc tcaggcccaa gaaagatggg gcagccactg gagtggatgc catctgcacc 240

caccgccttg accccaaaag ccctggactc aacagggagc agctgtactg ggagctaagc 300  
 aaactgacca atgacattga agagctgggc ccctacaccc tggacaggaa cagtctctat 360  
 gtcaatgggtt tcacccatca gagctctgtg tccaccacca gcactcctgg gacctccaca 420  
 gtggatctca gaacctcagg gactccatcc tccctctcca gcccacaaat tatg 474

<210> 99

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 99

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 ggtctgtctca ggcccttggt caagaacacc agtgtcagct ctctgtactc tggttgcaga 180  
 ctgaccttgc tcaggcctga gaaggatggg gcagccacca gagtggatgc tgcctgcacc 240  
 taccgccctg atcccaaaaag ccctggactg gacagagagc aactatactg ggagctgagc 300  
 cagctaaccc acagcatcac tgagctggga ccctacaccc tggacagggt cagtctctat 360  
 gtcaatgggt tcaacctctg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420  
 gtgcacctgg caacctctgg gactccatcc tccctgctg gccacaca 468

<210> 100

<211> 468

<212> DNA

<213> Homo sapiens

<400> 100

gcocctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcattat 60

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 ctgaccttgc tcagacctga gaaacatggg gcagccactg gagtggacgc catctgcacc 240  
 ctccgccttg atcccactgg tcctggactg gacagagagc ggctatactg ggagctgagc 300  
 cagctgacca acagcggtac agagctgggc ccctacaccc tggacaggga cagtctctat 360  
 gtcaatgggt tcaccacagc gagctctgtg ccaaccacca gtattcctgg gacctctgca 420  
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<210> 101

<211> 468

<212> DNA

<213> Homo sapiens

<400> 101  
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 ggtctgctca agcccttggt caagagcacc agtggttgcc ctctgtactc tggctgcaga 180  
 ctgaccttgc tcaggcctga aaaacgtggg gcagccaccg gcgtggacac catctgcaact 240  
 caccgccttg accctctaaa ccctggactg gacagagagc agctatactg ggagctgagc 300  
 aaactgaccc gtggcatcat cgagctgggc ccctacctcc tggacagagg cagtctctat 360  
 gtcaatgggt tcaccatcg gaactttgtg cccatcacca gactcctgg gacctccaca 420  
 gtacacctag gaacctctga aactccatcc tccctacctg gacctata 468

<210> 102

<211> 468

<212> DNA

<213> Homo sapiens

<400> 102  
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 gagggaggcca tgcgacaccc tggctccagg aagttcaata ccacggagag ggtcctacag 120

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ggctctgctca ggcccttggt caagaatacc agtatcggcc ctctgtactc cagctgcaga      180
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caccaccctg accctcaaag ccctggactg aacagagagc agctgtactg ggagctgagc      300
cagctgaccc acggcatcac tgagctgggc ccctacaccc tggacaggga cagtctctat      360
gtcgatgggt tcactcattg gagccccata ccgaccacca gcactcctgg gacctccata      420
gtgaacctgg gaacctctgg gatcccacct tccctccctg aaactaca                      468

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<210> 103

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

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<223> All N's = any nucleotide

<400> 103

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ggctctgctca aacccttggt caggaatagc agtctggaat acctctattc aggtctgcaga      180
ctagcctcac tcaggccaga gaaggatagc tcagccatgg cagtggatgc catctgcaca      240
catcgccctg accctgaaga cctcggactg gacagagagc gactgtactg ggagctgagc      300
aatctgacaa atggcatcca ggagctgggc ccctacaccc tggaccggaa cagtctctac      360
gtcaatgggt tcacccatcg gagctctggg ctaccacca gcactccttg gacttccaca      420
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<210> 104

<211> 468

<212> DNA

<213> Homo sapiens

<400> 104  
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 cagctgacca acagcatcac agagctggga ccctacaccc tggataggga cagtctctat 360  
 gtcaatggct tcaacccttg gagctctgtg ccaaccacca gcaactcctgg gacctccaca 420  
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<210> 105

<211> 468

<212> DNA

<213> Homo sapiens

<400> 105  
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 ctgaccttgc tcagacctga gaaacatggg gcagccactg gagtggacgc catctgcacc 240  
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 cagctgacca acagcgttac agagctgggc ccctacaccc tggacaggga cagtctctat 360  
 gtcaatggct tcacccatcg gagctctgtg ccaaccacca gtattcctgg gacctctgca 420  
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<210> 106

<211> 468

<212> DNA

<213> Homo sapiens

<400> 106



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<210> 107
<211> 468
<212> DNA
<213> Homo sapiens
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<210> 108
<211> 468
<212> DNA
<213> Homo sapiens
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<400> 108
gccctggcc ctctcctggt gccattcacc ctcaacttca ctatcaccaa cctgcagtat 60
gaggaggaca tgcgtcaccc tggttccagg aagttcaaca ccacggagag agtcctgcag 120
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ggctctgtca agcccttggt caagagcacc agtggtggcc ctctgtactc tggctgcaga    180
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caccgccttg accctctaaa cccaggactg gacagagagc agctatactg ggagctgagc    300
aaactgaccc gtggcatcat cgagctgggc ccctacctcc tggacagagg cagtctctat    360
gtcaatgggt tcacccatcg gacctctgtg cccaccacca gactcctgg gacctccaca    420
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<210> 109

<211> 465

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(465)

<223> All N's = any nucleotide

<400> 109

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actctgcttg gtcctatggt caagaacacc agtggtggcc ttctgtactc tggctgcaga    180
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caccgtcttg accccaaaag ccctggagtg gacagggagc aactatactg ggagctgagc    300
cagctgacca atggcattaa agaactgggc ccctacaccc tggacaggaa cagtctctat    360
gtcaatgggt tcacccattg gatccctgtg cccaccagca gactcctgg gacctccaca    420
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<210> 110

<211> 468

<212> DNA

<213> Homo sapiens

<400> 110  
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 agtctgcttg gtcccatggt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgaccttgc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc 240  
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 cagctgacca atggcatcaa agagctgggt ccctacaccc tggacagaaa cagtctctat 360  
 gtcaatgggt tcacccatca gacctctgcg cccaacacca gcactcctgg gacctccaca 420  
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<210> 111

<211> 465

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(465)

<223> All N's = any nucleotide

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 ggtctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180  
 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240  
 caccnncntn ancccaaaaag ncttgactg nacagngagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatgggt tcacccattg gatccctgtg cccaccagca gcactcctgg gacctccaca 420  
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<210> 112  
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 <212> DNA  
 <213> Homo sapiens

<220>

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<222> (1)..(468)

<223> All N's = any nucleotide

<400> 112  
 actgctggcc ctctcctggt gccgttcacc ctcaacttca ccatcaccaa cctgaagtac 60  
 gaggaggaca tgcattgccc tggctccagg aagttcaaca ccacagagag agtcctgcag 120  
 agtctgcttg gtcccatggt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgacctcgc tcagggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc 240  
 caccgtgttg accccaaaag ccctggagtg gacagggagc agctatactg ggagctgagc 300  
 cagctgacca atggcatcaa agagctgggt ccctacaccc tggacagaaa cagtctctat 360  
 gtcaatggtt tcacccatca gacctctgcg cccaacacca gcactcctgg gacctccaca 420  
 gtgnacntng gnacctongg gactccatcc tccttcccn gccncaca 468

<210> 113  
 <211> 468  
 <212> DNA  
 <213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 113  
 tctgctggcc ctctcctggt gccattcacc ctcaacttca ccatcaccaa cctgcagtac 60  
 gaggaggaca tgcatacccc aggctccagg aagttcaaca ccacggagcg ggtcctgcag 120  
 ggtctgcttg gtcccatggt caagaacacc agtgtcggcc ttctgtactc tggctgcaga 180  
 ctgaccttgc tcaggcctga gaagaatggg gcaaccactg gaatggatgc catctgcacc 240  
 caccgtcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatgggt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420  
 gtgnacntng gnacctcngg gactccatcc tccntccccc gccncaca 468

<210> 114

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 114  
 ncnctgncc ctctcctgnt ncnnttcacc ntcaacttna ccatcaccaa cctgcantan 60  
 gnggannaca tgcnnnnccc nggntccagg aagttcaaca ccacngagag ggttctgcag 120  
 ggtctgctca aacccttggt caggaatagc agtctggaat acctctattc aggctgcaga 180  
 ctagcctcac tcaggccaga gaaggatagc tcagccatgg cagtggatgc catctgcaca 240  
 catgcacctg acctgaaga cctcggactg gacagagagc gactgtactg ggagctgagc 300  
 aatctgacaa atggcatcca ggagctgggc ccctacaccc tggaccggaa cagtctctat 360  
 gtcaatgggt tcacccatcg aagctctatg cccaccacca gcactcctgg gacctccaca 420  
 gtggatgtgg gaacctcagg gactccatcc tccagcccca gccccacg 468

<210> 115

<211> 468

<212> DNA

<213> Homo sapiens

<400> 115

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actgctggcc ctctcctgat accattcacc ctcaacttca ccatcaccaa cctgcagtat    60
ggggaggaca tgggtcaccc tggctccagg aagttcaaca ccacagagag ggtcctgcag    120
gggtctgcttg gtcccatatt caagaacacc agtggtggcc ctctgtactc tggctgcaga    180
ctgacctctc tcaggtctga gaaggatgga gcagccactg gagtggatgc catctgcac    240
catcatcttg accccaaaag ccctggactc aacagagagc ggctgtactg ggagctgagc    300
caactgacca atggcatcaa agagctgggc ccctacaccc tggacaggaa cagtctctat    360
gtcaatggtt tcacccatcg gacctctgtg cccaccacca gcactcctgg gacctccaca    420
gtggaccttg gaacctcagg gactccattc tccctcccaa gccccgca                468
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<210> 116

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 116

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actgctggcc ctctcctggt gctgttcacc ctcaacttca ccatcaccaa cctgaagtat    60
gaggaggaca tgcctcgccc tggctccagg aagttcaaca ccaactgagag ggtcctgcag    120
actctgcttg gtctctatgtt caagaacacc agtggtggcc ttctgtactc tggctgcaga    180
ctgaccttgc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc    240
caccgtcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc    300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat    360
```

gtcaatgggtt tcacccatch ganctctgng cccaccacca gcaactcctgg gacctccaca 420  
 gtgnaentng gnacctcngg gactccatcc tccttccccn gccncaca 468

<210> 117

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 117

ncnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60  
 gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagag agtccttcag 120  
 ggtctgctca ggctgtgtt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgaccttgc tcaggcccaa gaaggatggg gcagccacca aagtggatgc catctgcacc 240  
 taccgccttg atcccaaaag ccctggactg gacagagagc agctatactg ggagctgagc 300  
 cagctaacco acagcatcac tgagctgggc ccctacacc aggacaggga cagtctctat 360  
 gtcaatgggt tcacccatcg gagctctgtg ccaaccacca gtattcctgg gacctctgca 420  
 gtgcacctgg aaaccactgg gactccatcc tccttccccg gccacaca 468

<210> 118

<211> 468

<212> DNA

<213> Homo sapiens

<400> 118

gagcctggcc ctctcctgat accattcact ttcaacttta ccatcaccaa cctgcgttat 60  
 gaggaaca tgcaaccccc tgggtccagg aagttcaaca ccacggagag gggtctgcag 120  
 ggtctgctca cgcccttggt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180

ctgaccttgc tcagacctga gaagcaggag gcagccactg gagtggacac catctgtacc 240  
 caccgcgttg atcccatcgg acctggactg gacagagagc ggctatactg ggagctgagc 300  
 cagctgacca acagcatcac agagctggga ccctacaccc tggataggga cagtctctat 360  
 gtogatggct tcaacccttg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420  
 gtgcacctgg caacctctgg gactccatcc cccctgcctg gccacaca 468

<210> 119

<211> 468

<212> DNA

<213> Homo sapiens

<400> 119  
 gccccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccga cctgcattat 60  
 gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag 120  
 ggtctgctca agcccttggt caagagcacc agcgttggcc ctctgtactc tggctgcaga 180  
 ctgaccttgc tcagacctga gaaacatggg gcagccactg gagtggacgc catctgcacc 240  
 ctccgccttg atcccatcgg tcctggactg gacagagagc ggctatactg ggagctgagc 300  
 cagctgacca acagcatcac agagctggga ccctacaccc tggataggga cagtctctat 360  
 gtcaatggct tcaacccttg gagctctgtg ccaaccacca gcactcctgg gacctccaca 420  
 gtgcacctgg caacctctgg gactccatcc tcctgcctg gccacaca 468

<210> 120

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide



<400> 120  
 actgctggcc ctctcctggt gccgttcacc ctcaacttca ccatcaccaa cctgaagtac 60  
 gaggaggaca tgcattgccc tggctccagg aagttcaaca ccacagagag agtcctgcag 120  
 agtctgcatg gtcccatggt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgaccttgc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcacc 240  
 caccgtcttg accccaaaag ccctggactg nacagnagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatgggt tcacccatcn ganctctgng cccaccacca gactccttg gacctccaca 420  
 gtgnacntng gnacctcngg gactccatcc tcctcctccn gccncaca 468

<210> 121

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 121  
 ncnctgncc ctctcctgnt ncncttcacc ntcaacttna ccatcaccaa cctgcantan 60  
 gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120  
 ggtctgctnn nncctnttt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180  
 ctgacctnnc tcaggnnga gaagnatggn gcagccactg gantggatgc catctgcanc 240  
 caccnncntn ancccaaaag ncctggactg nacagnagc ngctntactg ggagctnagc 300  
 canctgacca acagcatcac agagctggga ccctacaccc tggataggga cagtctctat 360  
 gtcaatgggt tcacccatcg aagctctatg cccaccacca gtattccttg gacctctgca 420  
 gtgcacctgg aaacctctgg gactccagcc tcctcctctg gccacaca 468

<210> 122  
 <211> 468  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)..(468)  
 <223> All N's = any nucleotide

<400> 122  
 gcccttgccc ctctcctggt gccattcacc ctcaacttca ctatcaccaa cctgcagtat 60  
 gaggaggaca tgcgtcaccc tggttccagg aagttcaaca ccacggagag agtcctgcag 120  
 ggtctgtctca agcccttggt caagagcacc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgaccttgc tcaggcctga aaaacgtggg gcagccaccg gcgtggacac catctgcact 240  
 caccgccttg accctctaaa ccctggactg nacagnagac ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatgggt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420  
 gtgnacntng gnacctengg gactccatcc tccttcccn gccncaca 468

<210> 123  
 <211> 468  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)..(468)  
 <223> All N's = any nucleotide

<400> 123

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nennctgncc ctctcctgnt ncnnttcacc ntcaacttna ccatcaccaa cctgcantan      60
gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag      120
ggctctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga      180
ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc      240
caccnnentn ancccaaaaag ncctggactg nacagnagagc ngctntactg ggagctnagc      300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat      360
gtcaatgggtt ttcaccctcg gagctctgtg ccaaccacca gcactcctgg gacctccaca      420
gtgcacctgg caacctctgg gactccatcc tccctgctg gccacaca                      468

```

<210> 124

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 124

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gccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcattat      60
gaagaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagcg ggtcctgcag      120
ggctctgcttg gtcccatgtt caagaacaca agtgtcggcc ttctgtactc tggctgcaga      180
ctgaccttgc tcaggcctga gaagaatggg gcagccactg gaatggatgc catctgcagc      240
caccgtcttg accccaaaag ccctggactg nacagnagagc ngctntactg ggagctnagc      300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat      360
gtcaatgggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca      420
gtgnacntng gnacctengg gactccatcc tccntcccn gccncaca                      468

```

<210> 125

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 125  
 ncnnetgncc ctctcctgnt ncnnttcacc ntcaacttna ccatcaccaa cctgcantan 60  
 gnngannaca tgcnnncnccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120  
 ggtctgctnn nncctnttt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180  
 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240  
 caccnncntn ancccaaaag ncttgactg nacagnagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatgggtt tcacccatca gaactctgtg ccaccacca gtactcctgg gacctccaca 420  
 gtgtactggg caaccactgg gactccatcc tccttccccg gccacaca 468

<210> 126

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 126  
 gagcctggcc ctctcctgat accattcact ttcaacttta ccatcaccaa cctgcattat 60  
 gaggaaaaca tgcaacaccc tggttccagg aagttcaaca ccacggagag ggttctgcag 120

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 128

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gcccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcattat      60
gaagaaaaca tgcaacaccc tgggtccagg aagttcaaca ccacggagag ggttctgcag      120
ggtctgctca agcccttggt caagagcacc agtggtggcc ctctgtactc tggctgcaga      180
ctgaccttgc tcagacctga gaaacatggg gcagccactg gagtggacgc catctgcacc      240
ctccgccttg atcccaactgg tcttgactg nacagnagc ngctntactg ggagctnagc      300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat      360
gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca      420
gtgnacntng gnacctengg gactccatcc tcctccccn gccncaca      468

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<210> 129

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 129

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ncnncctgncc ctctcctgnt ncnnttcacc ntcaacttna ccatcaccaa cctgcantan      60
ngggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag      120
ggtctgctnn nncccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga      180
ctgacctnnc tcaggnnga gaagnatggn gcagccactg gantggatgc catctgcanc      240

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caccnnntn ancccaaaag ncttgactg nacagngagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatgggtt tcacccatcg gacctctgtg cccaccacca gcactcctgg gacctccaca 420  
 gtgcacctgg caacctctgg gactccatcc tcctgcctg gccacaca 468

<210> 130

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 130  
 gccctgtcc ctctcttgat accattcacc ctcaacttta ccatcaccaa cctgcagtat 60  
 gaggaggaca tgcategccc tggatctagg aagttcaaca ccacagagag ggtcctgcag 120  
 ggtctgctta gtcccatttt caagaactcc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgacctctc tcaggcccga gaaggatggg gcagcaactg gaatggatgc tgtctgcctc 240  
 taccacccta atcccaaaag acctggactg nacagngagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatgggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420  
 gtgnacntng gnacctcngg gactccatcc tcctccccc gccncaca 468

<210> 131

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 131

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nennctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan      60
gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag      120
ggctctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga      180
ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc      240
caccnnentn ancccaaaag nccctggactg nacagngagc ngctntactg ggagctnagc      300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat      360
gtcaatgggt tcacccattg gagctctggg ctaccacca gcactccttg gacttccaca      420
gttgaccttg gaacctcagg gactccatcc cccgtcccca gccccaca      468

```

<210> 132

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 132

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actgctggcc ctctcctggt gccattcacc ctaaacttca ccatcaccaa cctgcagtat      60
gaggaggaca tgcatcgccc tggatctagg aagttcaacg ccacagagag ggtcctgcag      120
ggctctgctta gtcccatatt caagaacacc agtgttggcc ctctgtactc tggctgcaga      180
ctgaccttgc tcagacctga gaagcaggag gcagccactg gagtggacac catctgtacc      240
caccgcgttg atcccatcgg acctggactg nacagngagc ngctntactg ggagctnagc      300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat      360

```



gtcaatgggtt tcacccatch ganctctgng cccaccacca gcactcctgg gacctccaca 420  
 gtgnacntng gnacctcngg gactccatcc tcctccccn gccncaca 468

<210> 133

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 133

ncnctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60  
 gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120  
 ggtctgetnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggetgcaga 180  
 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240  
 caccnncntn ancccaaaag ncttgactg nacagnagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatgggtt tcacccatcg gagctttggg ctcaccacca gcactccttg gacttccaca 420  
 gttgaccttg gaacctcagg gactccatcc cccgtcccca gccccaca 468

<210> 134

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 134

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actgctggcc ctctcctggt gccattcacc ctaaacttca ccatcaccaa cctgcagtat    60
gaggaggaca tgcacgccc tggctccagg aagttcaaca ccacggagag ggtccttcag    120
ggtctgctta cgcccttggt caggaacacc agtgtcagct ctctgtactc tggttgcaga    180
ctgaccttgc tcaggcctga gaaggatggg gcagccacca gagtggatgc tgtctgcacc    240
catcgtcctg accccaaaag ccctggactg nacagnagc ngctntactg ggagctnagc    300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat    360
gtcaatgggt tcacccatcn ganctctgng cccaccacca gactcctgg gacctccaca    420
gtgnacntng gnacctcngg gactccatcc tcctccccc gccncaca                    468
```

<210> 135

<211> 465

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(465)

<223> All N's = any nucleotide

<400> 135

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ncnctgncc ctctcctgnt ncncttcacc ntcaacttna ccatcaccaa cctgcantan    60
gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag    120
ggtctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga    180
ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc    240
caccnncntn ancccaaaaag ncctggactg nacagnagc ngctntactg ggagctnagc    300
canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat    360
gtcaatgggt tcacccattg gatccctgtg cccaccagca gactcctgg gacctccaca    420
gtggaccttg ggtcaggagac tccatcctcc ctccccagcc ccaca                    465
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<210> 136  
 <211> 468  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)..(468)  
 <223> All N's = any nucleotide

<400> 136  
 actgctggcc ctctcctggg accattcacc ctcaacttca ccatcaccaa cctgcagtat 60  
 ggggaggaca tgggtcaccc tggctccagg aagttcaaca ccacagagag ggtcctgcag 120  
 ggtctgcttg gtcccatatt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
 ctgacctctc tcaggtccga gaaggatgga gcagccactg gagtggatgc catctgcac 240  
 catcatcttg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatgggt tcacccatcn ganctctgng cccaccacca gactcctgg gacctccaca 420  
 gtgnaentng gnacctcngg gactccatcc tccttcccn gccncaca 468

<210> 137  
 <211> 468  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)..(468)  
 <223> All N's = any nucleotide

<400> 137  
 nennctgncc ctctcctgnt nccnttcacc ntcaacttna ccatcaccaa cctgcantan 60  
 gnggannaca tgcnnncccc nggntccagg aagttcaaca ccacngagng ngtnctgcag 120  
 ggtctgctnn nccccntntt caagaacncc agtgtnggcc ntctgtactc tggctgcaga 180  
 ctgacctnnc tcaggncnga gaagnatggn gcagccactg gantggatgc catctgcanc 240  
 caccnncntn anccccaaaag ncctggactg nacagngagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatggtt tcacccatca gacctttgcg cccaacacca gcactcctgg gacctccaca 420  
 gtggaccttg ggacctcagg gactccatcc tccctcccca gccctaca 468

<210> 138

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 138  
 tctgctggcc ctctcctggt gccattcacc ctcaacttca ccatcaccaa cctgcagtac 60  
 gaggaggaca tgcatcaccc aggctccagg aagttcaaca ccacggagcg ggtcctgcag 120  
 ggtctgcttg gtcccatggt caagaacacc agtgtcggcc ttctgtactc tggctgcaga 180  
 ctgaccttgc tcaggcctga gaagaatggg gcagccacca gagtggatgc tgtctgcacc 240  
 catgctctg accccaaaag ccctggactg nacagngagc ngctntactg ggagctnagc 300  
 canctgacca annncatcnn ngagctgggn ccctacaccc tggacaggna cagtctctat 360  
 gtcaatggtt tcacccatcn ganctctgng cccaccacca gcactcctgg gacctccaca 420  
 gtgnacntng gnacctcngg gactccatcc tccntcccn gccncaca 468

<210> 139

<211> 468

<212> DNA

<213> Homo sapiens

<220>

<221> misc\_feature

<222> (1)..(468)

<223> All N's = any nucleotide

<400> 139  
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 gnggannaca tgcnnncnccc nggntccagg aagttcaaca ccacngagag gggtctgcag 120  
 ggtctgctca agcccttggt caagagcacc agtggtggcc ctctgtattc tggctgcaga 180  
 ctgaccttgc tcaggcctga gaaggacgga gtagccacca gagtggacgc catctgcacc 240  
 caccgccctg accccaaaat ccttgggcta gacagacagc agctatactg ggagctgagc 300  
 cagctgacct acagcatcac tgagctggga ccctacaccc tggataggga cagtctctat 360  
 gtcaatgggt tcacccagcg gagctctgtg cccaccacca gcactcctgg gactttcaca 420  
 gtacagccgg aaacctctga gactccatca tccctccctg gccccaca 468

<210> 140

<211> 468

<212> DNA

<213> Homo sapiens

<400> 140  
 gccactggcc ctgtcctgct gccattcacc ctcaatttta ccatcactaa cctgcagtat 60  
 gaggaggaca tgcctcgccc tggctccagg aagttcaaca ccacggagag ggctccttcag 120  
 ggtctgctta tgccttggt caagaacacc agtgctcagct ctctgtactc tgggtgcaga 180  
 ctgaccttgc tcaggcctga gaaggatggg gcagccacca gagtggatgc tgtctgcacc 240  
 catcgtcctg accccaaaag ccttggactg gacagagagc ggctgtactg gaagctgagc 300  
 cagctgacct acggcatcac tgagctgggc ccctacaccc tggacaggca cagtctctat 360

gtcaatgggt tcacccatca gagctctatg acgaccacca gaactcctga tacctccaca 420  
atgcacctgg caacctcgag aactccagcc tccctgtctg gacctacg 468

<210> 141

<211> 468

<212> DNA

<213> Homo sapiens

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gaggagaaca tgcatacccc tggctctaga aagtttaaca ccacggagag agtccttcag 120  
ggctctgtca ggctgtgtt caagaacacc agtggtggcc ctctgtactc tggctgcaga 180  
ctgaccttgc tcaggcccaa gaaggatggg gcagccacca aagtggatgc catctgcacc 240  
taccgccctg atccccaaag ccctggactg gacagagagc agctatactg ggagctgagc 300  
cagctaacc acagcatcac tgagctgggc ccctacacc tggacaggga cagtctctat 360  
gtcaatgggt tcacacagcg gagctctgtg cccaccacta gcattcctgg gacccccaca 420  
gtggacctgg gaacatctgg gactccagtt tctaaacctg gtcctctg 468

<210> 142

<211> 468

<212> DNA

<213> Homo sapiens

<400> 142  
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ggcctgtca ggtccctgtt caagagcacc agtggtggcc ctctgtactc tggctgcaga 180  
ctgactttgc tcaggcctga aaaggatggg acagccactg gagtggatgc catctgcacc 240  
caccacctg accccaaaag ccctaggctg gacagagagc agctgtattg ggagctgagc 300  
cagctgaccc acaatatcac tgagctgggc cactatgccc tggacaacga cagcctcttt 360  
gtcaatgggt tcaactatcg gagctctgtg tccaccacca gcactcctgg gacccccaca 420  
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<210> 143

<211> 399

<212> DNA

<213> Homo sapiens

<400> 143

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ctgctaaggc ccttgttcaa gaacaccagt gttggccctc tgtactctgg ctccaggctg     180
accttgctca ggccagagaa agatggggaa gccaccggag tggatgccat ctgcacccac     240
cgccctgacc ccacaggccc tgggctggac agagagcagc tgtatttga gctgagccag     300
ctgaccacaa gcatcactga gctgggcccc tacacactgg acagggacag tctctatgtc     360
aatggtttca cccatcggag ctctgtaccc accaccagc                               399
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<210> 144

<211> 453

<212> DNA

<213> Homo sapiens

<400> 144

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atggcgggaca tgggccaacc cggctccctc aagttcaaca tcacagacaa cgtcatgaag     120
cacctgctca gtcccttgtt ccagaggagc agcctgggtg cacggtacac aggctgcagg     180
gtcatcgcac taaggctctgt gaagaacggt gctgagacac ggggtggacct cctctgcacc     240
tacctgcagc ccctcagcgg ccaggtctg cctatcaagc aggtgttcca tgagctgagc     300
cagcagaccc atggcatcac ccggctgggc ccctactctc tggacaaaga cagcctctac     360
cttaacggtt acaatgaacc tggcttagat gagcctccta caactcccaa gccagccacc     420
acattcctgc ctccctctgtc agaagccaca aca                               453
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<210> 145

<211> 465

<212> DNA

<213> Homo sapiens

<400> 145

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ctgctcagac ccttggtcca gaagagcagc atgggccctt tctacttggg ttgccaaactg      180
atctccctca ggctgagaa ggatggggca gccactgggtg tggacaccac ctgcacctac      240
caccctgacc ctgtggggccc cgggctggac atacagcagc tttactggga gctgagtcag      300
ctgacctatg gtgtcaccca actgggcttc tatgtcctgg acagggatag cctcttcac      360
aatggctatg caccacagaa tttatcaatc cggggcgagt accagataaa tttccacatt      420
gtcaactgga acctcagtaa tccagacccc acatcctcag agtac                        465

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<210> 146

<211> 9799

<212> PRT

<213> Homo sapiens

<220>

<221> VARIANT

<222> (1)..(9799)

<223> Any "X" = any amino acid

<400> 146

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          20          25          30

Asn Ala Thr Glu Arg Glu Leu Gln Gly Leu Leu Lys Pro Leu Phe Arg
          35          40          45

Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly Cys Arg Leu Ala Ser Leu
50          55          60

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Arg	Pro	Glu	Lys	Asp	Ser	Ser	Ala	Met	Ala	Val	Asp	Ala	Ile	Cys	Thr	65	70	75	80
His	Arg	Pro	Asp	Pro	Glu	Asp	Leu	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	85	90	95	
Trp	Glu	Leu	Ser	Asn	Leu	Thr	Asn	Gly	Ile	Gln	Glu	Leu	Gly	Pro	Tyr	100	105	110	
Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	115	120	125	
Ser	Met	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Val	Gly	130	135	140	
Thr	Ser	Gly	Thr	Pro	Ser	Ser	Ser	Pro	Ser	Pro	Thr	Ala	Ala	Gly	Pro	145	150	155	160
Leu	Leu	Met	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	165	170	175	
Glu	Glu	Asp	Met	Arg	Arg	Thr	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met	Glu	180	185	190	
Ser	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	195	200	205	
Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	210	215	220	
Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	225	230	235	240
Pro	Lys	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	245	250	255	
Lys	Leu	Thr	Asn	Asp	Ile	Glu	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	260	265	270	
Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Ser	Ser	Val	Ser	Thr	275	280	285	
Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Arg	Thr	Ser	Gly	Thr	290	295	300	
Pro	Ser	Ser	Leu	Ser	Ser	Pro	Thr	Ile	Met	Ala	Ala	Gly	Pro	Leu	Leu	305	310	315	320
Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Gly	Glu	325	330	335	
Asp	Met	Gly	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	340	345	350	
Leu	Gln	Gly	Leu	Leu	Gly	Pro	Ile	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	355	360	365	
Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Ser	Glu	Lys	Asp	Gly				

370					375					380					
Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Ile	His	His	Leu	Asp	Pro	Lys
385					390					395					400
Ser	Pro	Gly	Leu	Asn	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu
				405					410					415	
Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser
			420					425					430		
Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Thr	Ser	Val	Pro	Thr	Ser	Ser
			435				440					445			
Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Phe
			450				455					460			
Ser	Leu	Pro	Ser	Pro	Ala	Thr	Ala	Gly	Pro	Leu	Leu	Val	Leu	Phe	Thr
465					470					475					480
Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Lys	Tyr	Glu	Glu	Asp	Met	His	Arg
				485					490					495	
Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Thr	Leu
			500					505					510		
Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly	Leu	Leu	Tyr	Ser	Gly
			515				520					525			
Cys	Arg	Leu	Thr	Leu	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly
			530			535				540					
Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Leu
545					550					555					560
Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile
				565					570					575	
Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn
			580					585					590		
Gly	Phe	Thr	His	Trp	Ile	Pro	Val	Pro	Thr	Ser	Ser	Thr	Pro	Gly	Thr
			595			600						605			
Ser	Thr	Val	Asp	Leu	Gly	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro
			610			615					620				
Thr	Ala	Ala	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile
625					630					635					640
Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	His	His	Pro	Gly	Ser	Arg	Lys
				645					650					655	
Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro	Met	Phe
			660					665					670		
Lys	Asn	Thr	Ser	Val	Gly	Leu	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu
			675			680					685				

Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys  
 690 695 700  
 Thr His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu  
 705 710 715 720  
 Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro  
 725 730 735  
 Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln  
 740 745 750  
 Thr Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu  
 755 760 765  
 Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly  
 770 775 780  
 Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln  
 785 790 795 800  
 Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr  
 805 810 815  
 Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys Ser Thr Ser  
 820 825 830  
 Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Ser Glu  
 835 840 845  
 Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His Arg Leu  
 850 855 860  
 Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr Trp Glu Leu  
 865 870 875 880  
 Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp  
 885 890 895  
 Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Ser Ala Pro  
 900 905 910  
 Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly  
 915 920 925  
 Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly Pro Leu Leu Val  
 930 935 940  
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp  
 945 950 955 960  
 Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
 965 970 975  
 Gln Gly Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu  
 980 985 990  
 Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asn Gly Ala  
 995 1000 1005

Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu Asp Pro Lys	1010	1015	1020
Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln	1025	1030	1035
Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg	1040	1045	1050
Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Val Ala	1055	1060	1065
Pro Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser	1070	1075	1080
Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Thr Ala Val Pro Leu	1085	1090	1095
Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr	1100	1105	1110
Gly Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe Asn Thr Thr	1115	1120	1125
Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Leu Phe Lys Asn Ser	1130	1135	1140
Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Ile Ser Leu Arg	1145	1150	1155
Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr	1160	1165	1170
His His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu	1175	1180	1185
Tyr Trp Gln Leu Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly	1190	1195	1200
Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr	1205	1210	1215
His Arg Ser Ser Gly Leu Thr Thr Ser Thr Pro Trp Thr Ser Thr	1220	1225	1230
Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val Pro Ser Pro	1235	1240	1245
Thr Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr	1250	1255	1260
Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser	1265	1270	1275
Arg Lys Phe Asn Ala Thr Glu Arg Val Leu Gln Gly Leu Leu Ser	1280	1285	1290
Pro Ile Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys			

1295	1300	1305
Arg Leu Thr Ser Leu Arg	Pro Glu Lys Asp Gly	Ala Ala Thr Gly
1310	1315	1320
Met Asp Ala Val Cys Leu	Tyr His Pro Asn Pro	Lys Arg Pro Gly
1325	1330	1335
Leu Asp Arg Glu Gln Leu	Tyr Trp Glu Leu Ser	Gln Leu Thr His
1340	1345	1350
Asn Ile Thr Glu Leu Gly	Pro Tyr Ser Leu Asp	Arg Asp Ser Leu
1355	1360	1365
Tyr Val Asn Gly Phe Thr	His Gln Asn Ser Val	Pro Thr Thr Ser
1370	1375	1380
Thr Pro Gly Thr Ser Thr	Val Tyr Trp Ala Thr	Thr Gly Thr Pro
1385	1390	1395
Ser Ser Phe Pro Gly His	Thr Glu Pro Gly Pro	Leu Leu Ile Pro
1400	1405	1410
Phe Thr Phe Asn Phe Thr	Ile Thr Asn Leu His	Tyr Glu Glu Asn
1415	1420	1425
Met Gln His Pro Gly Ser	Arg Lys Phe Asn Thr	Thr Glu Arg Val
1430	1435	1440
Leu Gln Gly Leu Leu Lys	Pro Leu Phe Lys Asn	Thr Ser Val Gly
1445	1450	1455
Pro Leu Tyr Ser Gly Cys	Arg Leu Thr Ser Leu	Arg Pro Glu Lys
1460	1465	1470
Asp Gly Ala Ala Thr Gly	Met Asp Ala Val Cys	Leu Tyr His Pro
1475	1480	1485
Asn Pro Lys Arg Pro Gly	Leu Asp Arg Glu Gln	Leu Tyr Cys Glu
1490	1495	1500
Leu Ser Gln Leu Thr His	Asn Ile Thr Glu Leu	Gly Pro Tyr Ser
1505	1510	1515
Leu Asp Arg Asp Ser Leu	Tyr Val Asn Gly Phe	Thr His Gln Asn
1520	1525	1530
Ser Val Pro Thr Thr Ser	Thr Pro Gly Thr Ser	Thr Val Tyr Trp
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Ala Thr Thr Gly Thr Pro	Ser Ser Phe Pro Gly	His Thr Glu Pro
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Gly Pro Leu Leu Ile Pro	Phe Thr Phe Asn Phe	Thr Ile Thr Asn
1565	1570	1575
Leu His Tyr Glu Glu Asn	Met Gln His Pro Gly	Ser Arg Lys Phe
1580	1585	1590

Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe
1595						1600					1605			
Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr
1610						1615					1620			
Leu	Leu	Arg	Pro	Glu	Lys	His	Glu	Ala	Ala	Thr	Gly	Val	Asp	Thr
1625						1630					1635			
Ile	Cys	Thr	His	Arg	Val	Asp	Pro	Ile	Gly	Pro	Gly	Leu	Asp	Arg
1640						1645					1650			
Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Ser	Ile	Thr
1655						1660					1665			
Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn
1670						1675					1680			
Gly	Phe	Asn	Pro	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly
1685						1690					1695			
Thr	Ser	Thr	Val	His	Leu	Ala	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu
1700						1705					1710			
Pro	Gly	His	Thr	Ala	Pro	Val	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Leu
1715						1720					1725			
Asn	Phe	Thr	Ile	Thr	Asn	Leu	His	Tyr	Glu	Glu	Asn	Met	Gln	His
1730						1735					1740			
Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly
1745						1750					1755			
Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr
1760						1765					1770			
Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	His	Glu	Ala
1775						1780					1785			
Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Val	Asp	Pro	Ile
1790						1795					1800			
Gly	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa
1805						1810					1815			
Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg
1820						1825					1830			
Xaa	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
1835						1840					1845			
Xaa	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser
1850						1855					1860			
Gly	Thr	Pro	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Ser	Ala	Gly	Pro	Leu
1865						1870					1875			
Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr
1880						1885					1890			

Glu	Glu	Asp	Met	His	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr
1895						1900					1905			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr
1910						1915					1920			
Ser	Val	Gly	Leu	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg
1925						1930					1935			
Pro	Glu	Lys	Asn	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Ile	Cys	Ser
1940						1945					1950			
His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu
1955						1960					1965			
Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Lys	Glu	Leu	Gly
1970						1975					1980			
Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr
1985						1990					1995			
His	Arg	Ser	Ser	Val	Ala	Pro	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr
2000						2005					2010			
Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro
2015						2020					2025			
Thr	Thr	Ala	Val	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr
2030						2035					2040			
Ile	Thr	Asn	Leu	Gln	Tyr	Gly	Glu	Asp	Met	Arg	His	Pro	Gly	Ser
2045						2050					2055			
Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly
2060						2065					2070			
Pro	Leu	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys
2075						2080					2085			
Arg	Leu	Ile	Ser	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly
2090						2095					2100			
Val	Asp	Ala	Ile	Cys	Thr	His	His	Leu	Asn	Pro	Gln	Ser	Pro	Gly
2105						2110					2115			
Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Gln	Leu	Ser	Gln	Met	Thr	Asn
2120						2125					2130			
Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu
2135						2140					2145			
Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Gly	Leu	Thr	Thr	Ser
2150						2155					2160			
Thr	Pro	Trp	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro
2165						2170					2175			
Ser	Pro	Val	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro

2180		2185		2190
Phe Thr Leu Asn Phe Thr	Ile Thr Asn Leu Gln Tyr	Glu Glu Asp		
2195	2200	2205		
Met His Arg Pro Gly Ser	Arg Lys Phe Asn Ala Thr	Glu Arg Val		
2210	2215	2220		
Leu Gln Gly Leu Leu Ser	Pro Ile Phe Lys Asn Ser	Ser Val Gly		
2225	2230	2235		
Pro Leu Tyr Ser Gly Cys	Arg Leu Thr Ser Leu Arg	Pro Glu Lys		
2240	2245	2250		
Asp Gly Ala Ala Thr Gly	Met Asp Ala Val Cys Leu	Tyr His Pro		
2255	2260	2265		
Asn Pro Lys Arg Pro Gly	Leu Asp Arg Glu Gln Leu	Tyr Trp Glu		
2270	2275	2280		
Leu Ser Gln Leu Thr His	Asn Ile Thr Glu Leu Gly	Pro Tyr Ser		
2285	2290	2295		
Leu Asp Arg Asp Ser Leu	Tyr Val Asn Gly Phe Thr	His Gln Ser		
2300	2305	2310		
Ser Met Thr Thr Thr Arg	Thr Pro Asp Thr Ser Thr	Met His Leu		
2315	2320	2325		
Ala Thr Ser Arg Thr Pro	Ala Ser Leu Ser Gly Pro	Thr Thr Ala		
2330	2335	2340		
Ser Pro Leu Leu Val Leu	Phe Thr Ile Asn Cys Thr	Ile Thr Asn		
2345	2350	2355		
Leu Gln Tyr Glu Glu Asp	Met Arg Arg Thr Gly Ser	Arg Lys Phe		
2360	2365	2370		
Asn Thr Met Glu Ser Val	Leu Gln Gly Leu Leu Lys	Pro Leu Phe		
2375	2380	2385		
Lys Asn Thr Ser Val Gly	Pro Leu Tyr Ser Gly Cys	Arg Leu Thr		
2390	2395	2400		
Leu Leu Arg Pro Lys Lys	Asp Gly Ala Ala Thr Gly	Val Asp Ala		
2405	2410	2415		
Ile Cys Thr His Arg Leu	Asp Pro Lys Ser Pro Gly	Leu Asn Arg		
2420	2425	2430		
Glu Gln Leu Tyr Trp Glu	Leu Ser Lys Leu Thr Asn	Asp Ile Glu		
2435	2440	2445		
Glu Leu Gly Pro Tyr Thr	Leu Asp Arg Asn Ser Leu	Tyr Val Asn		
2450	2455	2460		
Gly Phe Thr His Gln Ser	Ser Val Ser Thr Thr Ser	Thr Pro Gly		
2465	2470	2475		



Thr	Ser	Thr	Val	Asp	Leu	Arg	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu
2480						2485					2490			
Ser	Ser	Pro	Thr	Ile	Met	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe
2495						2500					2505			
Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met
2510						2515					2520			
Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu
2525						2530					2535			
Gln	Gly	Leu	Leu	Arg	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Ser	Ser
2540						2545					2550			
Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp
2555						2560					2565			
Gly	Ala	Ala	Thr	Arg	Val	Asp	Ala	Ala	Cys	Thr	Tyr	Arg	Pro	Asp
2570						2575					2580			
Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu
2585						2590					2595			
Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu
2600						2605					2610			
Asp	Arg	Val	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Asn	Pro	Arg	Ser	Ser
2615						2620					2625			
Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Ala
2630						2635					2640			
Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Val
2645						2650					2655			
Pro	Leu	Leu	Ile	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu
2660						2665					2670			
His	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn
2675						2680					2685			
Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Pro	Leu	Phe	Lys
2690						2695					2700			
Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu
2705						2710					2715			
Leu	Arg	Pro	Glu	Lys	His	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile
2720						2725					2730			
Cys	Thr	Leu	Arg	Leu	Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu
2735						2740					2745			
Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Ser	Val	Thr	Glu
2750						2755					2760			
Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly
2765						2770					2775			

Phe	Thr	Gln	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr
2780						2785					2790			
Ser	Ala	Val	His	Leu	Glu	Thr	Ser	Gly	Thr	Pro	Ala	Ser	Leu	Pro
2795						2800					2805			
Gly	His	Thr	Ala	Pro	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn
2810						2815					2820			
Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Val	Asp	Met	Arg	His	Pro
2825						2830					2835			
Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu
2840						2845					2850			
Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser
2855						2860					2865			
Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Arg	Gly	Ala	Ala
2870						2875					2880			
Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Leu	Asn
2885						2890					2895			
Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Lys	Leu
2900						2905					2910			
Thr	Arg	Gly	Ile	Ile	Glu	Leu	Gly	Pro	Tyr	Leu	Leu	Asp	Arg	Gly
2915						2920					2925			
Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Asn	Phe	Val	Pro	Ile
2930						2935					2940			
Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Gly	Thr	Ser	Glu
2945						2950					2955			
Thr	Pro	Ser	Ser	Leu	Pro	Arg	Pro	Ile	Val	Pro	Gly	Pro	Leu	Leu
2960						2965					2970			
Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu
2975						2980					2985			
Glu	Ala	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu
2990						2995					3000			
Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Pro	Leu	Phe	Lys	Asn	Thr	Ser
3005						3010					3015			
Ile	Gly	Pro	Leu	Tyr	Ser	Ser	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro
3020						3025					3030			
Glu	Lys	Asp	Lys	Ala	Ala	Thr	Arg	Val	Asp	Ala	Ile	Cys	Thr	His
3035						3040					3045			
His	Pro	Asp	Pro	Gln	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr
3050						3055					3060			
Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Thr	Glu	Leu	Gly	Pro

3065	3070	3075
Tyr Thr Leu Asp Arg Asp Ser	Leu Tyr Val Asp Gly Phe Thr His	
3080	3085	3090
Trp Ser Pro Ile Pro Thr Thr	Ser Thr Pro Gly Thr Ser Ile Val	
3095	3100	3105
Asn Leu Gly Thr Ser Gly Ile	Pro Pro Ser Leu Pro Glu Thr Thr	
3110	3115	3120
Xaa Xaa Xaa Pro Leu Leu Xaa	Pro Phe Thr Leu Asn Phe Thr Ile	
3125	3130	3135
Thr Asn Leu Xaa Tyr Glu Glu	Xaa Met Xaa Xaa Pro Gly Ser Arg	
3140	3145	3150
Lys Phe Asn Thr Thr Glu Arg	Val Leu Gln Gly Leu Leu Lys Pro	
3155	3160	3165
Leu Phe Arg Asn Ser Ser Leu	Glu Tyr Leu Tyr Ser Gly Cys Arg	
3170	3175	3180
Leu Ala Ser Leu Arg Pro Glu	Lys Asp Ser Ser Ala Met Ala Val	
3185	3190	3195
Asp Ala Ile Cys Thr His Arg	Pro Asp Pro Glu Asp Leu Gly Leu	
3200	3205	3210
Asp Arg Glu Arg Leu Tyr Trp	Glu Leu Ser Asn Leu Thr Asn Gly	
3215	3220	3225
Ile Gln Glu Leu Gly Pro Tyr	Thr Leu Asp Arg Asn Ser Leu Tyr	
3230	3235	3240
Val Asn Gly Phe Thr His Arg	Ser Ser Phe Leu Thr Thr Ser Thr	
3245	3250	3255
Pro Trp Thr Ser Thr Val Asp	Leu Gly Thr Ser Gly Thr Pro Ser	
3260	3265	3270
Pro Val Pro Ser Pro Thr Thr	Ala Gly Pro Leu Leu Val Pro Phe	
3275	3280	3285
Thr Leu Asn Phe Thr Ile Thr	Asn Leu Gln Tyr Glu Glu Asp Met	
3290	3295	3300
His Arg Pro Gly Ser Arg Arg	Phe Asn Thr Thr Glu Arg Val Leu	
3305	3310	3315
Gln Gly Leu Leu Thr Pro Leu	Phe Lys Asn Thr Ser Val Gly Pro	
3320	3325	3330
Leu Tyr Ser Gly Cys Arg Leu	Thr Leu Leu Arg Pro Glu Lys Gln	
3335	3340	3345
Glu Ala Ala Thr Gly Val Asp	Thr Ile Cys Thr His Arg Val Asp	
3350	3355	3360

Pro	Ile	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu
3365						3370					3375			
Ser	Gln	Leu	Thr	Asn	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu
3380						3385					3390			
Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Asn	Pro	Trp	Ser	Ser
3395						3400					3405			
Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Ala
3410						3415					3420			
Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Val
3425						3430					3435			
Pro	Leu	Leu	Ile	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asp	Leu
3440						3445					3450			
His	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn
3455						3460					3465			
Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys
3470						3475					3480			
Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu
3485						3490					3495			
Leu	Arg	Pro	Glu	Lys	His	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile
3500						3505					3510			
Cys	Thr	Leu	Arg	Leu	Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu
3515						3520					3525			
Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Ser	Val	Thr	Glu
3530						3535					3540			
Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly
3545						3550					3555			
Phe	Thr	His	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr
3560						3565					3570			
Ser	Ala	Val	His	Leu	Glu	Thr	Ser	Gly	Thr	Pro	Ala	Ser	Leu	Pro
3575						3580					3585			
Gly	His	Thr	Ala	Pro	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn
3590						3595					3600			
Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	His	Pro
3605						3610					3615			
Gly	Ser	Arg	Lys	Phe	Ser	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu
3620						3625					3630			
Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr	Ser
3635						3640					3645			
Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala	Ala
3650						3655					3660			

Thr	Arg	Val	Asp	Ala	Val	Cys	Thr	His	Arg	Pro	Asp	Pro	Lys	Ser
3665						3670					3675			
Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Lys	Leu	Ser	Gln	Leu
3680						3685					3690			
Thr	His	Gly	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	His
3695						3700					3705			
Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Ser	Ser	Met	Thr	Thr
3710						3715					3720			
Thr	Arg	Thr	Pro	Asp	Thr	Ser	Thr	Met	His	Leu	Ala	Thr	Ser	Arg
3725						3730					3735			
Thr	Pro	Ala	Ser	Leu	Ser	Gly	Pro	Thr	Thr	Ala	Ser	Pro	Leu	Leu
3740						3745					3750			
Val	Leu	Phe	Thr	Ile	Asn	Phe	Thr	Ile	Thr	Asn	Gln	Arg	Tyr	Glu
3755						3760					3765			
Glu	Asn	Met	His	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu
3770						3775					3780			
Arg	Val	Leu	Gln	Gly	Leu	Leu	Arg	Pro	Val	Phe	Lys	Asn	Thr	Ser
3785						3790					3795			
Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro
3800						3805					3810			
Lys	Lys	Asp	Gly	Ala	Ala	Thr	Lys	Val	Asp	Ala	Ile	Cys	Thr	Tyr
3815						3820					3825			
Arg	Pro	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr
3830						3835					3840			
Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro
3845						3850					3855			
Tyr	Thr	Gln	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His
3860						3865					3870			
Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr	Ser	Ala	Val
3875						3880					3885			
His	Leu	Glu	Thr	Ser	Gly	Thr	Pro	Ala	Ser	Leu	Pro	Gly	His	Thr
3890						3895					3900			
Ala	Pro	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile
3905						3910					3915			
Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg
3920						3925					3930			
Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro
3935						3940					3945			
Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg

3950	3955	3960
Leu Thr 3965	Leu Leu Arg Pro Glu 3970	Lys Arg Gly Ala Ala Thr Gly Val 3975
Asp Thr 3980	Ile Cys Thr His Arg 3985	Leu Asp Pro Leu Asn Pro Gly Leu 3990
Asp Arg 3995	Glu Gln Leu Tyr Trp 4000	Glu Leu Ser Lys Leu Thr Arg Gly 4005
Ile Ile 4010	Glu Leu Gly Pro Tyr 4015	Leu Leu Asp Arg Gly Ser Leu Tyr 4020
Val Asn 4025	Gly Phe Thr His Arg 4030	Thr Ser Val Pro Thr Thr Ser Thr 4035
Pro Gly 4040	Thr Ser Thr Val Asp 4045	Leu Gly Thr Ser Gly Thr Pro Phe 4050
Ser Leu 4055	Pro Ser Pro Ala Xaa 4060	Xaa Xaa Pro Leu Leu Xaa Pro Phe 4065
Thr Leu 4070	Asn Phe Thr Ile Thr 4075	Asn Leu Xaa Tyr Glu Glu Xaa Met 4080
Xaa Xaa 4085	Pro Gly Ser Arg Lys 4090	Phe Asn Thr Thr Glu Arg Val Leu 4095
Gln Thr 4100	Leu Leu Gly Pro Met 4105	Phe Lys Asn Thr Ser Val Gly Leu 4110
Leu Tyr 4115	Ser Gly Cys Arg Leu 4120	Thr Leu Leu Arg Ser Glu Lys Asp 4125
Gly Ala 4130	Ala Thr Gly Val Asp 4135	Ala Ile Cys Thr His Arg Leu Asp 4140
Pro Lys 4145	Ser Pro Gly Val Asp 4150	Arg Glu Gln Leu Tyr Trp Glu Leu 4155
Ser Gln 4160	Leu Thr Asn Gly Ile 4165	Lys Glu Leu Gly Pro Tyr Thr Leu 4170
Asp Arg 4175	Asn Ser Leu Tyr Val 4180	Asn Gly Phe Thr His Trp Ile Pro 4185
Val Pro 4190	Thr Ser Ser Thr Pro 4195	Gly Thr Ser Thr Val Asp Leu Gly 4200
Ser Gly 4205	Thr Pro Ser Leu Pro 4210	Ser Ser Pro Thr Thr Ala Gly Pro 4215
Leu Leu 4220	Val Pro Phe Thr Leu 4225	Asn Phe Thr Ile Thr Asn Leu Lys 4230
Tyr Glu 4235	Glu Asp Met His Cys 4240	Pro Gly Ser Arg Lys Phe Asn Thr 4245

Thr	Glu	Arg	Val	Leu	Gln	Ser	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn
	4250					4255					4260			
Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu
	4265					4270					4275			
Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys
	4280					4285					4290			
Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln
	4295					4300					4305			
Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu
	4310					4315					4320			
Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe
	4325					4330					4335			
Thr	His	Gln	Thr	Ser	Ala	Pro	Asn	Thr	Ser	Thr	Pro	Gly	Thr	Ser
	4340					4345					4350			
Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser
	4355					4360					4365			
Pro	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe
	4370					4375					4380			
Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly
	4385					4390					4395			
Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu
	4400					4405					4410			
Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr	Ser	Val	Gly	Xaa	Leu	Tyr	Ser	Gly
	4415					4420					4425			
Cys	Arg	Leu	Thr	Leu	Leu	Arg	Xaa	Glu	Lys	Xaa	Xaa	Ala	Ala	Thr
	4430					4435					4440			
Xaa	Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro
	4445					4450					4455			
Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr
	4460					4465					4470			
Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser
	4475					4480					4485			
Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Trp	Ile	Pro	Val	Pro	Thr	Ser
	4490					4495					4500			
Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Ser	Gly	Thr	Pro
	4505					4510					4515			
Ser	Ser	Leu	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro
	4520					4525					4530			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Lys	Tyr	Glu	Glu	Asp
	4535					4540					4545			

Met	His	Cys	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
4550						4555					4560			
Leu	Gln	Ser	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly
4565						4570					4575			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Ser	Glu	Lys
4580						4585					4590			
Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Val
4595						4600					4605			
Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu
4610						4615					4620			
Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr
4625						4630					4635			
Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Thr
4640						4645					4650			
Ser	Ala	Pro	Asn	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu
4655						4660					4665			
Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro	Thr	Ser	Ala
4670						4675					4680			
Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn
4685						4690					4695			
Leu	Gln	Tyr	Glu	Glu	Asp	Met	His	His	Pro	Gly	Ser	Arg	Lys	Phe
4700						4705					4710			
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro	Met	Phe
4715						4720					4725			
Lys	Asn	Thr	Ser	Val	Gly	Leu	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr
4730						4735					4740			
Leu	Leu	Arg	Pro	Glu	Lys	Asn	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala
4745						4750					4755			
Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg
4760						4765					4770			
Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa
4775						4780					4785			
Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn
4790						4795					4800			
Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser	Thr	Pro	Gly
4805						4810					4815			
Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro	Xaa	Xaa	Xaa
4820						4825					4830			
Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu



4835		4840		4845
Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa				
4850		4855		4860
Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly				
4865		4870		4875
Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr				
4880		4885		4890
Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser				
4895		4900		4905
Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu				
4910		4915		4920
Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn				
4925		4930		4935
Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg				
4940		4945		4950
Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met Pro				
4955		4960		4965
Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser				
4970		4975		4980
Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr Thr Ala Gly Pro Leu				
4985		4990		4995
Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr				
5000		5005		5010
Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe Asn Thr Thr				
5015		5020		5025
Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr				
5030		5035		5040
Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg				
5045		5050		5055
Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Ile				
5060		5065		5070
His His Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Arg Leu				
5075		5080		5085
Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly				
5090		5095		5100
Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr				
5105		5110		5115
His Arg Thr Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr				
5120		5125		5130

Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Phe	Ser	Leu	Pro	Ser	Pro
5135						5140					5145			
Ala	Thr	Ala	Gly	Pro	Leu	Leu	Val	Leu	Phe	Thr	Leu	Asn	Phe	Thr
5150						5155					5160			
Ile	Thr	Asn	Leu	Lys	Tyr	Glu	Glu	Asp	Met	His	Arg	Pro	Gly	Ser
5165						5170					5175			
Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Thr	Leu	Leu	Gly
5180						5185					5190			
Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly	Leu	Leu	Tyr	Ser	Gly	Cys
5195						5200					5205			
Arg	Leu	Thr	Leu	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly
5210						5215					5220			
Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly
5225						5230					5235			
Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa
5240						5245					5250			
Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu
5255						5260					5265			
Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser
5270						5275					5280			
Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro
5285						5290					5295			
Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro
5300						5305					5310			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa
5315						5320					5325			
Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
5330						5335					5340			
Leu	Gln	Gly	Leu	Leu	Arg	Pro	Val	Phe	Lys	Asn	Thr	Ser	Val	Gly
5345						5350					5355			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Lys	Lys
5360						5365					5370			
Asp	Gly	Ala	Ala	Thr	Lys	Val	Asp	Ala	Ile	Cys	Thr	Tyr	Arg	Pro
5375						5380					5385			
Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu
5390						5395					5400			
Leu	Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr
5405						5410					5415			
Gln	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser
5420						5425					5430			

Ser Val	Pro Thr Thr	Ser Ile	Pro Gly Thr	Ser Ala	Val His Leu
5435		5440		5445	
Glu Thr	Thr Gly Thr	Pro Ser	Ser Phe Pro	Gly His	Thr Glu Pro
5450		5455		5460	
Gly Pro	Leu Leu Ile	Pro Phe	Thr Phe Asn	Phe Thr	Ile Thr Asn
5465		5470		5475	
Leu Arg	Tyr Glu Glu	Asn Met	Gln His Pro	Gly Ser	Arg Lys Phe
5480		5485		5490	
Asn Thr	Thr Glu Arg	Val Leu	Gln Gly Leu	Leu Thr	Pro Leu Phe
5495		5500		5505	
Lys Asn	Thr Ser Val	Gly Pro	Leu Tyr Ser	Gly Cys	Arg Leu Thr
5510		5515		5520	
Leu Leu	Arg Pro Glu	Lys Gln	Glu Ala Ala	Thr Gly	Val Asp Thr
5525		5530		5535	
Ile Cys	Thr His Arg	Val Asp	Pro Ile Gly	Pro Gly	Leu Asp Arg
5540		5545		5550	
Glu Arg	Leu Tyr Trp	Glu Leu	Ser Gln Leu	Thr Asn	Ser Ile Thr
5555		5560		5565	
Glu Leu	Gly Pro Tyr	Thr Leu	Asp Arg Asp	Ser Leu	Tyr Val Asp
5570		5575		5580	
Gly Phe	Asn Pro Trp	Ser Ser	Val Pro Thr	Thr Ser	Thr Pro Gly
5585		5590		5595	
Thr Ser	Thr Val His	Leu Ala	Thr Ser Gly	Thr Pro	Ser Pro Leu
5600		5605		5610	
Pro Gly	His Thr Ala	Pro Val	Pro Leu Leu	Ile Pro	Phe Thr Leu
5615		5620		5625	
Asn Phe	Thr Ile Thr	Asp Leu	His Tyr Glu	Glu Asn	Met Gln His
5630		5635		5640	
Pro Gly	Ser Arg Lys	Phe Asn	Thr Thr Glu	Arg Val	Leu Gln Gly
5645		5650		5655	
Leu Leu	Lys Pro Leu	Phe Lys	Ser Thr Ser	Val Gly	Pro Leu Tyr
5660		5665		5670	
Ser Gly	Cys Arg Leu	Thr Leu	Leu Arg Pro	Glu Lys	His Gly Ala
5675		5680		5685	
Ala Thr	Gly Val Asp	Ala Ile	Cys Thr Leu	Arg Leu	Asp Pro Thr
5690		5695		5700	
Gly Pro	Gly Leu Asp	Arg Glu	Arg Leu Tyr	Trp Glu	Leu Ser Gln
5705		5710		5715	
Leu Thr	Asn Ser Ile	Thr Glu	Leu Gly Pro	Tyr Thr	Leu Asp Arg

5720	5725	5730
Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser Ser Val Pro		
5735	5740	5745
Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser		
5750	5755	5760
Gly Thr Pro Ser Ser Leu Pro Gly His Thr Thr Ala Gly Pro Leu		
5765	5770	5775
Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Lys Tyr		
5780	5785	5790
Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe Asn Thr Thr		
5795	5800	5805
Glu Arg Val Leu Gln Ser Leu His Gly Pro Met Phe Lys Asn Thr		
5810	5815	5820
Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg		
5825	5830	5835
Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr		
5840	5845	5850
His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Xaa Leu		
5855	5860	5865
Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly		
5870	5875	5880
Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Xaa		
5885	5890	5895
Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr Ser Xaa		
5900	5905	5910
Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa		
5915	5920	5925
Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr		
5930	5935	5940
Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser		
5945	5950	5955
Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Xaa		
5960	5965	5970
Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly Cys		
5975	5980	5985
Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa		
5990	5995	6000
Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly		
6005	6010	6015

Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Asn
6020						6025					6030			
Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu
6035						6040					6045			
Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Met	Pro	Thr	Thr	Ser
6050						6055					6060			
Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu	Glu	Thr	Ser	Gly	Thr	Pro
6065						6070					6075			
Ala	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Gly	Pro	Leu	Leu	Val	Pro
6080						6085					6090			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp
6095						6100					6105			
Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
6110						6115					6120			
Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly
6125						6130					6135			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys
6140						6145					6150			
Arg	Gly	Ala	Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Leu
6155						6160					6165			
Asp	Pro	Leu	Asn	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu
6170						6175					6180			
Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa
6185						6190					6195			
Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa
6200						6205					6210			
Xaa	Xaa	Xaa	Xaa	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu
6215						6220					6225			
Xaa	Thr	Ser	Gly	Thr	Pro	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa
6230						6235					6240			
Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn
6245						6250					6255			
Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe
6260						6265					6270			
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Xaa	Pro	Xaa	Phe
6275						6280					6285			
Lys	Xaa	Thr	Ser	Val	Gly	Xaa	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr
6290						6295					6300			
Leu	Leu	Arg	Xaa	Glu	Lys	Xaa	Xaa	Ala	Ala	Thr	Xaa	Val	Asp	Xaa
6305						6310					6315			

Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro	Gly	Leu	Asp	Arg
	6320					6325					6330			
Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa
	6335					6340					6345			
Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn
	6350					6355					6360			
Gly	Phe	His	Pro	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly
	6365					6370					6375			
Thr	Ser	Thr	Val	His	Leu	Ala	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu
	6380					6385					6390			
Pro	Gly	His	Thr	Ala	Pro	Val	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Leu
	6395					6400					6405			
Asn	Phe	Thr	Ile	Thr	Asn	Leu	His	Tyr	Glu	Glu	Asn	Met	Gln	His
	6410					6415					6420			
Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly
	6425					6430					6435			
Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly	Leu	Leu	Tyr
	6440					6445					6450			
Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asn	Gly	Ala
	6455					6460					6465			
Ala	Thr	Gly	Met	Asp	Ala	Ile	Cys	Ser	His	Arg	Leu	Asp	Pro	Lys
	6470					6475					6480			
Ser	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa
	6485					6490					6495			
Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg
	6500					6505					6510			
Xaa	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
	6515					6520					6525			
Xaa	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser
	6530					6535					6540			
Gly	Thr	Pro	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu
	6545					6550					6555			
Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr
	6560					6565					6570			
Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr
	6575					6580					6585			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr
	6590					6595					6600			
Ser	Val	Gly	Xaa	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg

6605		6610		6615
Xaa Glu Lys Xaa Xaa Ala	Ala Thr Xaa Val Asp	Xaa Xaa Cys Xaa		
6620	6625	6630		
Xaa Xaa Xaa Asp Pro Xaa	Xaa Pro Gly Leu Asp	Arg Glu Xaa Leu		
6635	6640	6645		
Tyr Trp Glu Leu Ser Xaa	Leu Thr Xaa Xaa Ile	Xaa Glu Leu Gly		
6650	6655	6660		
Pro Tyr Xaa Leu Asp Arg	Xaa Ser Leu Tyr Val	Asn Gly Phe Thr		
6665	6670	6675		
His Gln Asn Ser Val Pro	Thr Thr Ser Thr Pro	Gly Thr Ser Thr		
6680	6685	6690		
Val Tyr Trp Ala Thr Thr	Gly Thr Pro Ser Ser	Phe Pro Gly His		
6695	6700	6705		
Thr Glu Pro Gly Pro Leu	Leu Ile Pro Phe Thr	Phe Asn Phe Thr		
6710	6715	6720		
Ile Thr Asn Leu His Tyr	Glu Glu Asn Met Gln	His Pro Gly Ser		
6725	6730	6735		
Arg Lys Phe Asn Thr Thr	Glu Arg Val Leu Gln	Gly Leu Leu Thr		
6740	6745	6750		
Pro Leu Phe Lys Asn Thr	Ser Val Gly Pro Leu	Tyr Ser Gly Cys		
6755	6760	6765		
Arg Leu Thr Leu Leu Arg	Pro Glu Lys Gln Glu	Ala Ala Thr Gly		
6770	6775	6780		
Val Asp Thr Ile Cys Thr	His Arg Val Asp Pro	Ile Gly Pro Gly		
6785	6790	6795		
Leu Asp Arg Glu Xaa Leu	Tyr Trp Glu Leu Ser	Xaa Leu Thr Xaa		
6800	6805	6810		
Xaa Ile Xaa Glu Leu Gly	Pro Tyr Xaa Leu Asp	Arg Xaa Ser Leu		
6815	6820	6825		
Tyr Val Asn Gly Phe Xaa	Xaa Xaa Xaa Xaa Xaa	Xaa Xaa Thr Ser		
6830	6835	6840		
Thr Pro Gly Thr Ser Xaa	Val Xaa Leu Xaa Thr	Ser Gly Thr Pro		
6845	6850	6855		
Xaa Xaa Xaa Pro Xaa Xaa	Thr Xaa Xaa Xaa Pro	Leu Leu Xaa Pro		
6860	6865	6870		
Phe Thr Leu Asn Phe Thr	Ile Thr Asn Leu Xaa	Tyr Glu Glu Xaa		
6875	6880	6885		
Met Xaa Xaa Pro Gly Ser	Arg Lys Phe Asn Thr	Thr Glu Arg Val		
6890	6895	6900		

Leu	Gln	Gly	Leu	Leu	Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr	Ser	Val	Gly
6905						6910					6915			
Xaa	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Xaa	Glu	Lys
6920						6925					6930			
Xaa	Xaa	Ala	Ala	Thr	Xaa	Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa
6935						6940					6945			
Asp	Pro	Xaa	Xaa	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu
6950						6955					6960			
Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa
6965						6970					6975			
Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser
6980						6985					6990			
Ser	Val	Pro	Thr	Thr	Ser	Ser	Pro	Gly	Thr	Ser	Thr	Val	His	Leu
6995						7000					7005			
Ala	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro
7010						7015					7020			
Val	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn
7025						7030					7035			
Leu	His	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe
7040						7045					7050			
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe
7055						7060					7065			
Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr
7070						7075					7080			
Leu	Leu	Arg	Pro	Glu	Lys	His	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala
7085						7090					7095			
Ile	Cys	Thr	Leu	Arg	Leu	Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg
7100						7105					7110			
Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa
7115						7120					7125			
Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn
7130						7135					7140			
Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser	Thr	Pro	Gly
7145						7150					7155			
Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro	Xaa	Xaa	Xaa
7160						7165					7170			
Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu
7175						7180					7185			
Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa
7190						7195					7200			



Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly
	7205					7210					7215			
Leu	Leu	Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr	Ser	Val	Gly	Xaa	Leu	Tyr
	7220					7225					7230			
Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Xaa	Glu	Lys	Xaa	Xaa	Ala
	7235					7240					7245			
Ala	Thr	Xaa	Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Asp	Pro	Xaa
	7250					7255					7260			
Xaa	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa
	7265					7270					7275			
Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg
	7280					7285					7290			
Xaa	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Thr	Ser	Val	Pro
	7295					7300					7305			
Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Ala	Thr	Ser
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Gly	Thr	Pro	Ser	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Val	Pro	Leu
	7325					7330					7335			
Leu	Ile	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr
	7340					7345					7350			
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	7355					7360					7365			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Ser	Pro	Ile	Phe	Lys	Asn	Ser
	7370					7375					7380			
Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg
	7385					7390					7395			
Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu
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Tyr	His	Pro	Asn	Pro	Lys	Arg	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu
	7415					7420					7425			
Tyr	Cys	Glu	Leu	Ser	Gln	Leu	Thr	His	Asn	Ile	Thr	Glu	Leu	Gly
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Pro	Tyr	Ser	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr
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	7460					7465					7470			
Val	Tyr	Trp	Ala	Thr	Thr	Gly	Thr	Pro	Ser	Ser	Phe	Pro	Gly	His
	7475					7480					7485			
Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe	Thr

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Pro Xaa Phe Lys Xaa Thr	Ser Val Gly Xaa Leu Tyr	Ser Gly Cys		
7535	7540	7545		
Arg Leu Thr Leu Leu Arg	Xaa Glu Lys Xaa Xaa Ala	Ala Thr Xaa		
7550	7555	7560		
Val Asp Xaa Xaa Cys Xaa	Xaa Xaa Xaa Asp Pro Xaa	Xaa Pro Gly		
7565	7570	7575		
Leu Asp Arg Glu Xaa Leu	Tyr Trp Glu Leu Ser Xaa	Leu Thr Xaa		
7580	7585	7590		
Xaa Ile Xaa Glu Leu Gly	Pro Tyr Xaa Leu Asp Arg	Xaa Ser Leu		
7595	7600	7605		
Tyr Val Asn Gly Phe Thr	His Trp Ser Ser Gly Leu	Thr Thr Ser		
7610	7615	7620		
Thr Pro Trp Thr Ser Thr	Val Asp Leu Gly Thr Ser	Gly Thr Pro		
7625	7630	7635		
Ser Pro Val Pro Ser Pro	Thr Thr Ala Gly Pro Leu	Leu Val Pro		
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Phe Thr Leu Asn Phe Thr	Ile Thr Asn Leu Gln Tyr	Glu Glu Asp		
7655	7660	7665		
Met His Arg Pro Gly Ser	Arg Lys Phe Asn Ala Thr	Glu Arg Val		
7670	7675	7680		
Leu Gln Gly Leu Leu Ser	Pro Ile Phe Lys Asn Thr	Ser Val Gly		
7685	7690	7695		
Pro Leu Tyr Ser Gly Cys	Arg Leu Thr Leu Leu Arg	Pro Glu Lys		
7700	7705	7710		
Gln Glu Ala Ala Thr Gly	Val Asp Thr Ile Cys Thr	His Arg Val		
7715	7720	7725		
Asp Pro Ile Gly Pro Gly	Leu Asp Arg Glu Xaa Leu	Tyr Trp Glu		
7730	7735	7740		
Leu Ser Xaa Leu Thr Xaa	Xaa Ile Xaa Glu Leu Gly	Pro Tyr Xaa		
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Leu Asp Arg Xaa Ser Leu	Tyr Val Asn Gly Phe Xaa	Xaa Xaa Xaa		
7760	7765	7770		
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7775	7780	7785		

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Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn	7805	7810	7815
Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe	7820	7825	7830
Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Xaa Pro Xaa Phe	7835	7840	7845
Lys Xaa Thr Ser Val Gly Xaa Leu Tyr Ser Gly Cys Arg Leu Thr	7850	7855	7860
Leu Leu Arg Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa	7865	7870	7875
Xaa Cys Xaa Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly Leu Asp Arg	7880	7885	7890
Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa	7895	7900	7905
Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn	7910	7915	7920
Gly Phe Thr His Arg Ser Phe Gly Leu Thr Thr Ser Thr Pro Trp	7925	7930	7935
Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro Val	7940	7945	7950
Pro Ser Pro Thr Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu	7955	7960	7965
Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met His Arg	7970	7975	7980
Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly	7985	7990	7995
Leu Leu Thr Pro Leu Phe Arg Asn Thr Ser Val Ser Ser Leu Tyr	8000	8005	8010
Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Ala	8015	8020	8025
Ala Thr Arg Val Asp Ala Val Cys Thr His Arg Pro Asp Pro Lys	8030	8035	8040
Ser Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa	8045	8050	8055
Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg	8060	8065	8070
Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa	8075	8080	8085

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	8105					8110					8115			
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Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr
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Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr
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Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro
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Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met		
8435	8440	8445
Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu		
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Gln Gly Leu Leu Xaa Pro Xaa Phe Lys Xaa Thr Ser Val Gly Xaa		
8465	8470	8475
Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Xaa Glu Lys Xaa		
8480	8485	8490
Xaa Ala Ala Thr Xaa Val Asp Xaa Xaa Cys Xaa Xaa Xaa Xaa Asp		
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Pro Xaa Xaa Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu		
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Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu		
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Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr Phe		
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Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly		
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Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala Gly		
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Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu		
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Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe Asn		
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Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu		
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Cys Thr His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu		
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Xaa Leu Tyr Trp Glu Leu Ser	Xaa Leu Thr Xaa Xaa Ile Xaa Glu
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Leu Gly Pro Tyr Xaa Leu Asp	Arg Xaa Ser Leu Tyr Val Asn Gly
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Gln	Ser	Ser	Met	Thr	Thr	Thr	Arg	Thr	Pro	Asp	Thr	Ser	Thr	Met
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His	Leu	Ala	Thr	Ser	Arg	Thr	Pro	Ala	Ser	Leu	Ser	Gly	Pro	Thr
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Ser Gln Leu Thr His Asn Ile	Thr Glu Leu Gly His	Tyr Ala Leu
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Val Ser Thr Thr Ser Thr Pro	Gly Thr Pro Thr Val	Tyr Leu Gly
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Ala Ser Lys Thr Pro Ala Ser	Ile Phe Gly Pro Ser	Ala Ala Ser
9350	9355	9360
His Leu Leu Ile Leu Phe Thr	Leu Asn Phe Thr Ile	Thr Asn Leu
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Arg Tyr Glu Glu Asn Met Trp	Pro Gly Ser Arg Lys	Phe Asn Thr
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Thr Ser Val Gly Pro Leu Tyr	Ser Gly Ser Arg Leu	Thr Leu Leu
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Leu Tyr Leu Glu Leu Ser Gln	Leu Thr His Ser Ile	Thr Glu Leu
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Gly Pro Tyr Thr Leu Asp Arg	Asp Ser Leu Tyr Val	Asn Gly Phe
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Thr His Arg Ser Ser Val Pro	Thr Thr Ser Thr Gly	Val Val Ser
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Glu Glu Pro Phe Thr Leu Asn	Phe Thr Ile Asn Asn	Leu Arg Tyr
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 Phe His Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu Gly  
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 Tyr Ser Pro Asp Met Gly Lys Gly Ser Ala Thr Phe Asn Ser Thr  
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 Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly  
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Tyr

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<212> DNA

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&lt;213&gt; Homo sapiens

&lt;400&gt; 148

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Ser	Thr	Glu	Gly	Val	Leu	Gln	His	Leu	Leu	Arg	Pro	Leu	Phe	Gln	Lys	35	40	45	
Ser	Ser	Met	Gly	Pro	Phe	Tyr	Leu	Gly	Cys	Gln	Leu	Ile	Ser	Leu	Arg	50	55	60	
Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Thr	Thr	Cys	Thr	Tyr	65	70	75	80
His	Pro	Asp	Pro	Val	Gly	Pro	Gly	Leu	Asp	Ile	Gln	Gln	Leu	Tyr	Trp	85	90	95	
Glu	Leu	Ser	Gln	Leu	Thr	His	Gly	Val	Thr	Gln	Leu	Gly	Phe	Tyr	Val	100	105	110	
Leu	Asp	Arg	Asp	Ser	Leu	Phe	Ile	Asn	Gly	Tyr	Ala	Pro	Gln	Asn	Leu	115	120	125	
Ser	Ile	Arg	Gly	Glu	Tyr	Gln	Ile	Asn	Phe	His	Ile	Val	Asn	Trp	Asn	130	135	140	
Leu	Ser	Asn	Pro	Asp	Pro	Thr	Ser	Ser	Glu	Tyr	Ile	Thr	Leu	Leu	Arg	145	150	155	160
Asp	Ile	Gln	Asp	Lys	Val	Thr	Thr	Leu	Tyr	Lys	Gly	Ser	Gln	Leu	His	165	170	175	
Asp	Thr	Phe	Arg	Phe	Cys	Leu	Val	Thr	Asn	Leu	Thr	Met	Asp	Ser	Val	180	185	190	
Leu	Val	Thr	Val	Lys	Ala	Leu	Phe	Ser	Ser	Asn	Leu	Asp	Pro	Ser	Leu	195	200	205	
Val	Glu	Gln	Val	Phe	Leu	Asp	Lys	Thr	Leu	Asn	Ala	Ser	Phe	His	Trp	210	215	220	
Leu	Gly	Ser	Thr	Tyr	Gln	Leu	Val	Asp	Ile	His	Val	Thr	Glu	Met	Glu	225	230	235	240
Ser	Ser	Val	Tyr	Gln	Pro	Thr	Ser	Ser	Ser	Ser	Thr	Gln	His	Phe	Tyr	245	250	255	
Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Pro	Tyr	Ser	Gln	Asp	Lys	Ala	Gln	260	265	270	
Pro	Gly	Thr	Thr	Asn	Tyr	Gln	Arg	Asn	Lys	Arg	Asn	Ile	Glu	Asp	Ala	275	280	285	

Leu Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys Ser Tyr Phe Ser Asp  
 290 295 300  
 Cys Gln Val Ser Thr Phe Arg Ser Val Pro Asn Arg His His Thr Gly  
 305 310 315 320  
 Val Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala Arg Arg Val Asp Arg  
 325 330 335  
 Val Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr Arg Asn Gly Thr Gln  
 340 345 350  
 Leu Gln Asn Phe Thr Leu Asp Arg Ser Ser Val Leu Val Asp Gly Tyr  
 355 360 365  
 Ser Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn Ser Asp Leu Pro Phe  
 370 375 380  
 Trp Ala Val Ile Leu Ile Gly Leu Ala Gly Leu Leu Gly Leu Ile Thr  
 385 390 395 400  
 Cys Leu Ile Cys Gly Val Leu Val Thr Thr Arg Arg Arg Lys Lys Glu  
 405 410 415  
 Gly Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His  
 420 425 430  
 Leu Asp Leu Glu Asp Leu Gln  
 435  
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 1 5 10 15  
 Ala His Arg Gly Thr Ile Arg Pro Val Lys Gly Pro Gln Thr Ser Thr  
 20 25 30  
 Ser Pro Ala Ser Pro Lys Gly Leu His Thr Gly Gly Thr Lys Arg Met  
 35 40 45  
 Glu Thr Thr Thr Thr Ala Leu Lys Thr Thr Thr Thr Ala Leu Lys Thr  
 50 55 60  
 Thr Ser Arg Ala Thr Leu Thr Thr Ser Val Tyr Thr Pro Thr Leu Gly  
 65 70 75 80  
 Thr Leu Thr Pro Leu Asn Ala Ser Arg Gln Met Ala Ser Thr Ile Leu

85					90					95					
Thr	Glu	Met	Met	Ile	Thr	Thr	Pro	Tyr	Val	Phe	Pro	Asp	Val	Pro	Glu
			100					105					110		
Thr	Thr	Ser	Ser	Leu	Ala	Thr	Ser	Leu	Gly	Ala	Glu	Thr	Ser	Thr	Ala
		115					120					125			
Leu	Pro	Arg	Thr	Thr	Pro	Ser	Val	Leu	Asn	Arg	Glu	Ser	Glu	Thr	Thr
	130					135					140				
Ala	Ser	Leu	Val	Ser	Arg	Ser	Gly	Ala	Glu	Arg	Ser	Pro	Val	Ile	Gln
145						150					155				160
Thr	Leu	Asp	Val	Ser	Ser	Ser	Glu	Pro	Asp	Thr	Thr	Ala	Ser	Trp	Val
				165					170					175	
Ile	His	Pro	Ala	Glu	Thr	Ile	Pro	Thr	Val	Ser	Lys	Thr	Thr	Pro	Asn
			180					185					190		
Phe	Phe	His	Ser	Glu	Leu	Asp	Thr	Val	Ser	Ser	Thr	Ala	Thr	Ser	His
		195					200					205			
Gly	Ala	Asp	Val	Ser	Ser	Ala	Ile	Pro	Thr	Asn	Ile	Ser	Pro	Ser	Glu
	210					215					220				
Leu	Asp	Ala	Leu	Thr	Pro	Leu	Val	Thr	Ile	Ser	Gly	Thr	Asp	Thr	Ser
225						230					235				240
Thr	Thr	Phe	Pro	Thr	Leu	Thr	Lys	Ser	Pro	His	Glu	Thr	Glu	Thr	Arg
				245					250					255	
Thr	Thr	Trp	Leu	Thr	His	Pro	Ala	Glu	Thr	Ser	Ser	Thr	Ile	Pro	Arg
			260					265					270		
Thr	Ile	Pro	Asn	Phe	Ser	His	His	Glu	Ser	Asp	Ala	Thr	Pro	Ser	Ile
		275					280					285			
Ala	Thr	Ser	Pro	Gly	Ala	Glu	Thr	Ser	Ser	Ala	Ile	Pro	Ile	Met	Thr
	290					295					300				
Val	Ser	Pro	Gly	Ala	Glu	Asp	Leu	Val	Thr	Ser	Gln	Val	Thr	Ser	Ser
305						310					315				320
Gly	Thr	Asp	Arg	Asn	Met	Thr	Ile	Pro	Thr	Leu	Thr	Leu	Ser	Pro	Gly
				325					330					335	
Glu	Pro	Lys	Thr	Ile	Ala	Ser	Leu	Val	Thr	His	Pro	Glu	Ala	Gln	Thr
			340					345					350		
Ser	Ser	Ala	Ile	Pro	Thr	Ser	Thr	Ile	Ser	Pro	Ala	Val	Ser	Arg	Leu
		355					360					365			
Val	Thr	Ser	Met	Val	Thr	Ser	Leu	Ala	Ala	Lys	Thr	Ser	Thr	Thr	Asn
	370					375					380				
Arg	Ala	Leu	Thr	Asn	Ser	Pro	Gly	Glu	Pro	Ala	Thr	Thr	Val	Ser	Leu
385						390					395				400

Val Thr His Pro Ala Gln Thr Ser Pro Thr Val Pro Trp Thr Thr Ser  
 405 410 415  
 Ile Phe Phe His Ser Lys Ser Asp Thr Thr Pro Ser Met Thr Thr Ser  
 420 425 430  
 His Gly Ala Glu Ser Ser Ser Ala Val Pro Thr Pro Thr Val Ser Thr  
 435 440 445  
 Glu Val Pro Gly Val Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val  
 450 455 460  
 Ile Ser Thr Thr Ile Pro Ile Leu Thr Leu Ser Pro Gly Glu Pro Glu  
 465 470 475 480  
 Thr Thr Pro Ser Met Ala Thr Ser His Gly Glu Glu Ala Ser Ser Ala  
 485 490 495  
 Ile Pro Thr Pro Thr Val Ser Pro Gly Val Pro Gly Val Val Thr Ser  
 500 505 510  
 Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu  
 515 520 525  
 Thr Phe Ser Leu Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser  
 530 535 540  
 His Gly Thr Glu Ala Gly Ser Ala Val Pro Thr Val Leu Pro Glu Val  
 545 550 555 560  
 Pro Gly Met Val Thr Ser Leu Val Ala Ser Ser Arg Ala Val Thr Ser  
 565 570 575  
 Thr Thr Leu Pro Thr Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr  
 580 585 590  
 Pro Ser Met Ala Thr Ser His Gly Ala Glu Ala Ser Ser Thr Val Pro  
 595 600 605  
 Thr Val Ser Pro Glu Val Pro Gly Val Val Thr Ser Leu Val Thr Ser  
 610 615 620  
 Ser Ser Gly Val Asn Ser Thr Ser Ile Pro Thr Leu Ile Leu Ser Pro  
 625 630 635 640  
 Gly Glu Leu Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu  
 645 650 655  
 Ala Ser Ser Ala Val Pro Thr Pro Thr Val Ser Pro Gly Val Ser Gly  
 660 665 670  
 Val Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr  
 675 680 685  
 Ile Pro Ile Leu Thr Leu Ser Ser Ser Glu Pro Glu Thr Thr Pro Ser  
 690 695 700  
 Met Ala Thr Ser His Gly Val Glu Ala Ser Ser Ala Val Leu Thr Val  
 705 710 715 720

Ser Pro Glu Val Pro Gly Met Val Thr Ser Leu Val Thr Ser Ser Arg  
 725 730 735  
 Ala Val Thr Ser Thr Thr Ile Pro Thr Leu Thr Ile Ser Ser Asp Glu  
 740 745 750  
 Pro Glu Thr Thr Thr Ser Leu Val Thr His Ser Glu Ala Lys Met Ile  
 755 760 765  
 Ser Ala Ile Pro Thr Leu Ala Val Ser Pro Thr Val Gln Gly Leu Val  
 770 775 780  
 Thr Ser Leu Val Thr Ser Ser Gly Ser Glu Thr Ser Ala Phe Ser Asn  
 785 790 795 800  
 Leu Thr Val Ala Ser Ser Gln Pro Glu Thr Ile Asp Ser Trp Val Ala  
 805 810 815  
 His Pro Gly Thr Glu Ala Ser Ser Val Val Pro Thr Leu Thr Val Ser  
 820 825 830  
 Thr Gly Glu Pro Phe Thr Asn Ile Ser Leu Val Thr His Pro Ala Glu  
 835 840 845  
 Ser Ser Ser Thr Leu Pro Arg Thr Thr Ser Arg Phe Ser His Ser Glu  
 850 855 860  
 Leu Asp Thr Met Pro Ser Thr Val Thr Ser Pro Glu Ala Glu Ser Ser  
 865 870 875 880  
 Ser Ala Ile Ser Thr Thr Ile Ser Pro Gly Ile Pro Gly Val Leu Thr  
 885 890 895  
 Ser Leu Val Thr Ser Ser Gly Arg Asp Ile Ser Ala Thr Phe Pro Thr  
 900 905 910  
 Val Pro Glu Ser Pro His Glu Ser Glu Ala Thr Ala Ser Trp Val Thr  
 915 920 925  
 His Pro Ala Val Thr Ser Thr Thr Val Pro Arg Thr Thr Pro Asn Tyr  
 930 935 940  
 Ser His Ser Glu Pro Asp Thr Thr Pro Ser Ile Ala Thr Ser Pro Gly  
 945 950 955 960  
 Ala Glu Ala Thr Ser Asp Phe Pro Thr Ile Thr Val Ser Pro Asp Val  
 965 970 975  
 Pro Asp Met Val Thr Ser Gln Val Thr Ser Ser Gly Thr Asp Thr Ser  
 980 985 990  
 Ile Thr Ile Pro Thr Leu Thr Leu Ser Ser Gly Glu Pro Glu Thr Thr  
 995 1000 1005  
 Thr Ser Phe Ile Thr Tyr Ser Glu Thr His Thr Ser Ser Ala Ile  
 1010 1015 1020  
 Pro Thr Leu Pro Val Ser Pro Gly Ala Ser Lys Met Leu Thr Ser

1025	1030	1035
Leu Val Ile Ser Ser Gly Thr Asp Ser Thr Thr Thr Phe Pro Thr		
1040	1045	1050
Leu Thr Glu Thr Pro Tyr Glu Pro Glu Thr Thr Ala Ile Gln Leu		
1055	1060	1065
Ile His Pro Ala Glu Thr Asn Thr Met Val Pro Arg Thr Thr Pro		
1070	1075	1080
Lys Phe Ser His Ser Lys Ser Asp Thr Thr Leu Pro Val Ala Ile		
1085	1090	1095
Thr Ser Pro Gly Pro Glu Ala Ser Ser Ala Val Ser Thr Thr Thr		
1100	1105	1110
Ile Ser Pro Asp Met Ser Asp Leu Val Thr Ser Leu Val Pro Ser		
1115	1120	1125
Ser Gly Thr Asp Thr Ser Thr Thr Phe Pro Thr Leu Ser Glu Thr		
1130	1135	1140
Pro Tyr Glu Pro Glu Thr Thr Ala Thr Trp Leu Thr His Pro Ala		
1145	1150	1155
Glu Thr Ser Thr Thr Val Ser Gly Thr Ile Pro Asn Phe Ser His		
1160	1165	1170
Arg Gly Ser Asp Thr Ala Pro Ser Met Val Thr Ser Pro Gly Val		
1175	1180	1185
Asp Thr Arg Ser Gly Val Pro Thr Thr Thr Ile Pro Pro Ser Ile		
1190	1195	1200
Pro Gly Val Val Thr Ser Gln Val Thr Ser Ser Ala Thr Asp Thr		
1205	1210	1215
Ser Thr Ala Ile Pro Thr Leu Thr Pro Ser Pro Gly Glu Pro Glu		
1220	1225	1230
Thr Thr Ala Ser Ser Ala Thr His Pro Gly Thr Gln Thr Gly Phe		
1235	1240	1245
Thr Val Pro Ile Arg Thr Val Pro Ser Ser Glu Pro Asp Thr Met		
1250	1255	1260
Ala Ser Trp Val Thr His Pro Pro Gln Thr Ser Thr Pro Val Ser		
1265	1270	1275
Arg Thr Thr Ser Ser Phe Ser His Ser Ser Pro Asp Ala Thr Pro		
1280	1285	1290
Val Met Ala Thr Ser Pro Arg Thr Glu Ala Ser Ser Ala Val Leu		
1295	1300	1305
Thr Thr Ile Ser Pro Gly Ala Pro Glu Met Val Thr Ser Gln Ile		
1310	1315	1320

1025 1030 1035 1040 1045 1050 1055 1060 1065 1070 1075 1080 1085 1090 1095 1100 1105 1110 1115 1120 1125 1130 1135 1140 1145 1150 1155 1160 1165 1170 1175 1180 1185 1190 1195 1200 1205 1210 1215 1220 1225 1230 1235 1240 1245 1250 1255 1260 1265 1270 1275 1280 1285 1290 1295 1300 1305 1310 1315 1320



Thr	Ser	Ser	Gly	Ala	Ala	Thr	Ser	Thr	Thr	Val	Pro	Thr	Leu	Thr
1325						1330					1335			
His	Ser	Pro	Gly	Met	Pro	Glu	Thr	Thr	Ala	Leu	Leu	Ser	Thr	His
1340						1345					1350			
Pro	Arg	Thr	Glu	Thr	Ser	Lys	Thr	Phe	Pro	Ala	Ser	Thr	Val	Phe
1355						1360					1365			
Pro	Gln	Val	Ser	Glu	Thr	Thr	Ala	Ser	Leu	Thr	Ile	Arg	Pro	Gly
1370						1375					1380			
Ala	Glu	Thr	Ser	Thr	Ala	Leu	Pro	Thr	Gln	Thr	Thr	Ser	Ser	Leu
1385						1390					1395			
Phe	Thr	Leu	Leu	Val	Thr	Gly	Thr	Ser	Arg	Val	Asp	Leu	Ser	Pro
1400						1405					1410			
Thr	Ala	Ser	Pro	Gly	Val	Ser	Ala	Lys	Thr	Ala	Pro	Leu	Ser	Thr
1415						1420					1425			
His	Pro	Gly	Thr	Glu	Thr	Ser	Thr	Met	Ile	Pro	Thr	Ser	Thr	Leu
1430						1435					1440			
Ser	Leu	Gly	Leu	Leu	Glu	Thr	Thr	Gly	Leu	Leu	Ala	Thr	Ser	Ser
1445						1450					1455			
Ser	Ala	Glu	Thr	Ser	Thr	Ser	Thr	Leu	Thr	Leu	Thr	Val	Ser	Pro
1460						1465					1470			
Ala	Val	Ser	Gly	Leu	Ser	Ser	Ala	Ser	Ile	Thr	Thr	Asp	Lys	Pro
1475						1480					1485			
Gln	Thr	Val	Thr	Ser	Trp	Asn	Thr	Glu	Thr	Ser	Pro	Ser	Val	Thr
1490						1495					1500			
Ser	Val	Gly	Pro	Pro	Glu	Phe	Ser	Arg	Thr	Val	Thr	Gly	Thr	Thr
1505						1510					1515			
Met	Thr	Leu	Ile	Pro	Ser	Glu	Met	Pro	Thr	Pro	Pro	Lys	Thr	Ser
1520						1525					1530			
His	Gly	Glu	Gly	Val	Ser	Pro	Thr	Thr	Ile	Leu	Arg	Thr	Thr	Met
1535						1540					1545			
Val	Glu	Ala	Thr	Asn	Leu	Ala	Thr	Thr	Gly	Ser	Ser	Pro	Thr	Val
1550						1555					1560			
Ala	Lys	Thr	Thr	Thr	Thr	Phe	Asn	Thr	Leu	Ala	Gly	Ser	Leu	Phe
1565						1570					1575			
Thr	Pro	Leu	Thr	Thr	Pro	Gly	Met	Ser	Thr	Leu	Ala	Ser	Glu	Ser
1580						1585					1590			
Val	Thr	Ser	Arg	Thr	Ser	Tyr	Asn	His	Arg	Ser	Trp	Ile	Ser	Thr
1595						1600					1605			
Thr	Ser	Ser	Tyr	Asn	Arg	Arg	Tyr	Trp	Thr	Pro	Ala	Thr	Ser	Thr
1610						1615					1620			

Pro Val Thr Ser Thr Phe Ser Pro Gly Ile Ser Thr Ser Ser Ile  
1625 1630 1635

Pro Ser Ser Thr Ala Ala Thr Val Pro Phe Met Val Pro Phe Thr  
1640 1645 1650

Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Glu Glu Asp Met Arg  
1655 1660 1665

His Pro Gly Ser Arg Lys Phe Asn Ala Thr Glu Arg Glu Leu Gln  
1670 1675 1680

Gly Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu  
1685 1690 1695

Tyr Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser  
1700 1705 1710

Ser Ala Met Ala Val Asp Ala Ile Cys Thr His Arg Pro Asp Pro  
1715 1720 1725

Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser  
1730 1735 1740

Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp  
1745 1750 1755

Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Arg Ser Ser Met  
1760 1765 1770

Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Val Gly Thr  
1775 1780 1785

Ser Gly Thr Pro Ser Ser Ser Pro Ser Pro Thr  
1790 1795

<210> 150

<211> 156

<212> PRT

<213> Homo sapiens

<400> 150

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr  
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Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys  
35 40 45

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu

50		55		60											
Arg	Pro	Glu	Lys	His	Glu	Ala	Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr
65					70					75					80
His	Arg	Val	Asp	Pro	Ile	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr
				85					90					95	
Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr
			100					105					110		
Thr	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Asn	Pro	Arg	Ser
		115						120				125			
Ser	Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Ala
	130					135					140				
Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Lys	Leu	Thr				
145					150					155					

&lt;210&gt; 151

&lt;211&gt; 507

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;220&gt;

&lt;221&gt; CDS

&lt;222&gt; (1)..(507)

&lt;400&gt; 151

atg	aga	gga	tcg	cat	cac	cat	cac	cat	cac	gga	tcc	atg	ggc	cac	aca	48
Met	Arg	Gly	Ser	His	His	His	His	His	His	Gly	Ser	Met	Gly	His	Thr	
1				5					10					15		

gag	cct	ggc	cct	ctc	ctg	ata	cca	ttc	act	ttc	aac	ttt	acc	atc	acc	96
Glu	Pro	Gly	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Phe	Asn	Phe	Thr	Ile	Thr	
			20					25					30			

aac	ctg	cat	tat	gag	gaa	aac	atg	caa	cac	cct	ggt	tcc	agg	aag	ttc	144
Asn	Leu	His	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	
		35					40					45				

aac	acc	acg	gag	agg	gtt	ctg	cag	ggt	ctg	ctc	aag	ccc	ttg	ttc	aag	192
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	
	50					55					60					

aac	acc	agt	gtt	ggc	cct	ctg	tac	tct	ggc	tgc	aga	ctg	acc	ttg	ctc	240
Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	
65				70						75					80	

aga cct gag aag cat gag gca gcc act gga gtg gac acc atc tgt acc 288  
 Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr  
                   85                                  90                                  95

cac cgc gtt gat ccc atc gga cct gga ctg gac aga gag cgg cta tac 336  
 His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr  
                   100                                  105                                  110

tgg gag ctg agc cag ctg acc aac agc atc aca gag ctg gga ccc tac 384  
 Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr  
                   115                                  120                                  125

acc ctg gac agg gac agt ctc tat gtc aat ggc ttc aac cct cgg agc 432  
 Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser  
                   130                                  135                                  140

tct gtg cca acc acc agc act cct ggg acc tcc aca gtg cac ctg gca 480  
 Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala  
                   145                                  150                                  155                                  160

acc tct ggg act cca tcc tcc ctg cct 507  
 Thr Ser Gly Thr Pro Ser Ser Leu Pro  
                                   165

<210> 152

<211> 169

<212> PRT

<213> Homo sapiens

<400> 152

Met Arg Gly Ser His His His His His His Gly Ser Met Gly His Thr  
 1                  5                                  10                                  15

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr  
                   20                                  25                                  30

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe  
                   35                                  40                                  45

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys  
                   50                                  55                                  60

Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu  
 65                  70                                  75                                  80

Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr  
                   85                                  90                                  95

His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr  
 100 105 110

Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr  
 115 120 125

Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser  
 130 135 140

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala  
 145 150 155 160

Thr Ser Gly Thr Pro Ser Ser Leu Pro  
 165

<210> 153

<211> 507

<212> DNA

<213> Homo sapiens

<400> 153

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ggtggttggc acagagctcc gagggttgaa gccattgaca tagagactgt ccctgtccag	120
ggtgtagggc cccagctctg tgatgctgtt ggtcagctgg ctcagctccc agtatagccg	180
ctctctgtcc agtccaggtc cgatgggata aacgcggtgg gtacagatgg tgtccactcc	240
agtggctgcc tcatgcttct caggtctgag caaggtcagt ctgcagccag agtacagagg	300
gccaacactg gtgttcttga acaagggctt gagcagaccc tgcagaaccc tctccgtggt	360
gttgaacttc ctggaaccag ggtgttgcat gttttcctca taatgcaggt tggatgatgg	420
aaagttgaaa gtgaatggta tcaggagagg gccaggctct gtgtggccca tggatccgtg	480
atggtgatgg tgatgcgata ctctcat	507

<210> 154

<211> 9

<212> PRT

<213> Homo sapiens

<400> 154

Arg Leu Tyr Trp Glu Leu Ser Gln Leu  
1 5

<210> 155

<211> 9

<212> PRT

<213> Homo sapiens

<400> 155

Thr Leu Asp Arg Asp Ser Leu Tyr Val  
1 5

<210> 156

<211> 9

<212> PRT

<213> Homo sapiens

<400> 156

Val Leu Gln Gly Leu Leu Lys Pro Leu  
1 5

<210> 157

<211> 9

<212> PRT

<213> Homo sapiens

<400> 157

Gln Leu Thr Asn Ser Ile Thr Glu Leu  
1 5

<210> 158

<211> 780

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 158

Ala	Thr	Val	Pro	Phe	Met	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	1	5	10	15
Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	20	25	30	
Asn	Ala	Thr	Glu	Arg	Glu	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Arg	35	40	45	
Asn	Ser	Ser	Leu	Glu	Tyr	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ala	Ser	Leu	50	55	60	
Arg	Pro	Glu	Lys	Asp	Ser	Ser	Ala	Met	Ala	Val	Asp	Ala	Ile	Cys	Thr	65	70	75	
His	Arg	Pro	Asp	Pro	Glu	Asp	Leu	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	85	90	95	
Trp	Glu	Leu	Ser	Asn	Leu	Thr	Asn	Gly	Ile	Gln	Glu	Leu	Gly	Pro	Tyr	100	105	110	
Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	115	120	125	
Ser	Met	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Val	Gly	130	135	140	
Thr	Ser	Gly	Thr	Pro	Ser	Ser	Ser	Pro	Ser	Pro	Thr	Ala	Ala	Gly	Pro	145	150	155	
Leu	Leu	Met	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	165	170	175	
Glu	Glu	Asp	Met	Arg	Arg	Thr	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met	Glu	180	185	190	
Ser	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	195	200	205	
Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	210	215	220	
Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	225	230	235	
Pro	Lys	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	245	250	255	
Lys	Leu	Thr	Asn	Asp	Ile	Glu	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	260	265	270	

Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr  
 275 280 285  
 Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr  
 290 295 300  
 Pro Ser Ser Leu Ser Ser Pro Thr Ile Met Ala Gly Pro Leu Leu Val  
 305 310 315 320  
 Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu Asp  
 325 330 335  
 Met Gly His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu  
 340 345 350  
 Gln Gly Leu Leu Gly Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu  
 355 360 365  
 Tyr Ser Gly Cys Arg Leu Thr Ser Leu Arg Ser Glu Lys Asp Gly Ala  
 370 375 380  
 Ala Thr Gly Val Asp Ala Ile Cys Ile His His Leu Asp Pro Lys Ser  
 385 390 395 400  
 Pro Gly Leu Asn Arg Glu Arg Leu Tyr Trp Glu Leu Ser Gln Leu Thr  
 405 410 415  
 Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu  
 420 425 430  
 Tyr Val Asn Gly Phe Thr His Arg Thr Ser Val Pro Thr Ser Ser Thr  
 435 440 445  
 Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe Ser  
 450 455 460  
 Leu Pro Ser Pro Ala Thr Ala Gly Pro Leu Leu Val Leu Phe Thr Leu  
 465 470 475 480  
 Asn Phe Thr Ile Thr Asn Leu Lys Tyr Glu Glu Asp Met His Arg Pro  
 485 490 495  
 Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Thr Leu Leu  
 500 505 510  
 Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys  
 515 520 525  
 Arg Leu Thr Leu Leu Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val  
 530 535 540  
 Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp  
 545 550 555 560  
 Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys  
 565 570 575  
 Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
 580 585 590



Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr Pro Gly Thr Ser  
 595 600 605  
 Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr  
 610 615 620  
 Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
 625 630 635 640  
 Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe  
 645 650 655  
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys  
 660 665 670  
 Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu  
 675 680 685  
 Arg Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr  
 690 695 700  
 His Arg Leu Asp Pro Lys Ser Pro Gly Val Asp Arg Glu Gln Leu Tyr  
 705 710 715 720  
 Trp Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr  
 725 730 735  
 Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr  
 740 745 750  
 Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu Gly  
 755 760 765  
 Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr  
 770 775 780

<210> 159

<211> 780

<212> PRT

<213> Homo sapiens

<400> 159

Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
 1 5 10 15  
 Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe  
 20 25 30  
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe Lys  
 35 40 45  
 Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu

50					55					60					
Arg	Pro	Glu	Lys	Asn	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Ile	Cys	Ser
65					70					75					80
His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr
				85					90					95	
Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr
			100					105					110		
Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser
		115						120					125		
Ser	Val	Ala	Pro	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly
	130						135				140				
Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro	Thr	Thr	Ala	Val	Pro
145					150					155					160
Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr
				165					170					175	
Gly	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu
			180					185					190		
Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro	Leu	Phe	Lys	Asn	Ser	Ser	Val
		195					200					205			
Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ile	Ser	Leu	Arg	Ser	Glu	Lys
	210					215					220				
Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	His	Leu	Asn
225					230					235					240
Pro	Gln	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Gln	Leu	Ser
				245					250					255	
Gln	Met	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg
			260					265					270		
Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Gly	Leu	Thr
		275					280					285			
Thr	Ser	Thr	Pro	Trp	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr
	290					295					300				
Pro	Ser	Pro	Val	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro
305					310					315					320
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met
				325					330					335	
His	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ala	Thr	Glu	Arg	Val	Leu	Gln
			340					345					350		
Gly	Leu	Leu	Ser	Pro	Ile	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr
		355					360					365			

Ser Gly Cys Arg Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala  
 370 375 380  
 Thr Gly Met Asp Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro  
 385 390 395 400  
 Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His  
 405 410 415  
 Asn Ile Thr Glu Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr  
 420 425 430  
 Val Asn Gly Phe Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro  
 435 440 445  
 Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe  
 450 455 460  
 Pro Gly His Thr Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn  
 465 470 475 480  
 Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly  
 485 490 495  
 Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys  
 500 505 510  
 Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg  
 515 520 525  
 Leu Thr Ser Leu Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp  
 530 535 540  
 Ala Val Cys Leu Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg  
 545 550 555 560  
 Glu Gln Leu Tyr Cys Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu  
 565 570 575  
 Leu Gly Pro Tyr Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe  
 580 585 590  
 Thr His Gln Asn Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr  
 595 600 605  
 Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser Phe Pro Gly His Thr  
 610 615 620  
 Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr  
 625 630 635 640  
 Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe  
 645 650 655  
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Lys Pro Leu Phe Lys  
 660 665 670  
 Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu  
 675 680 685

Arg Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr  
 690 695 700  
 His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr  
 705 710 715 720  
 Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr  
 725 730 735  
 Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Arg Ser  
 740 745 750  
 Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala  
 755 760 765  
 Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr  
 770 775 780  
 <210> 160  
 <211> 624  
 <212> PRT  
 <213> Homo sapiens  
 <400> 160  
 Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
 1 5 10 15  
 Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Arg Phe  
 20 25 30  
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Thr Pro Leu Phe Lys  
 35 40 45  
 Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu  
 50 55 60  
 Arg Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr  
 65 70 75 80  
 His Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr  
 85 90 95  
 Trp Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr  
 100 105 110  
 Thr Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Asn Pro Trp Ser  
 115 120 125  
 Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val His Leu Ala  
 130 135 140  
 Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr Ala Pro Val Pro

145		150		155		160									
Leu	Leu	Ile	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asp	Leu	His	Tyr
				165					170					175	
Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu
			180					185					190		
Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val
		195					200					205			
Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys
	210					215					220				
His	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	Leu	Arg	Leu	Asp
225					230					235					240
Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser
				245					250					255	
Gln	Leu	Thr	Asn	Ser	Val	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg
			260					265					270		
Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Val	Pro	Thr
		275					280					285			
Thr	Ser	Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu	Glu	Thr	Ser	Gly	Thr
	290					295					300				
Pro	Ala	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Gly	Pro	Leu	Leu	Val	Pro
305					310					315					320
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met
				325					330					335	
Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Ser	Thr	Thr	Glu	Arg	Val	Leu	Gln
			340					345					350		
Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr
		355					360					365			
Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala	Ala
	370					375					380				
Thr	Arg	Val	Asp	Ala	Val	Cys	Thr	His	Arg	Pro	Asp	Pro	Lys	Ser	Pro
385					390					395					400
Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Lys	Leu	Ser	Gln	Leu	Thr	His
				405					410					415	
Gly	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	His	Ser	Leu	Tyr
			420					425					430		
Val	Asn	Gly	Phe	Thr	His	Gln	Ser	Ser	Met	Thr	Thr	Thr	Arg	Thr	Pro
		435					440					445			
Asp	Thr	Ser	Thr	Met	His	Leu	Ala	Thr	Ser	Arg	Thr	Pro	Ala	Ser	Leu
	450					455					460				

Ser Gly Pro Thr Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn  
465 470 475 480

Phe Thr Ile Thr Asn Gln Arg Tyr Glu Glu Asn Met His His Pro Gly  
485 490 495

Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Arg  
500 505 510

Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg  
515 520 525

Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp  
530 535 540

Ala Ile Cys Thr Tyr Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg  
545 550 555 560

Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu  
565 570 575

Leu Gly Pro Tyr Thr Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe  
580 585 590

Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile Pro Gly Thr Ser Ala  
595 600 605

Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser Leu Pro Gly His Thr  
610 615 620

<210> 161

<211> 468

<212> PRT

<213> Homo sapiens

<400> 161

Ala Thr Gly Pro Val Leu Leu Pro Phe Thr Leu Asn Phe Thr Ile Thr  
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Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Met Pro Leu Phe Lys  
35 40 45

Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu  
50 55 60

Arg Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys Thr  
65 70 75 80

His Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr  
85 90 95

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Trp Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr  
 100 105 110  
 Thr Leu Asp Arg His Ser Leu Tyr Val Asn Gly Phe Thr His Gln Ser  
 115 120 125  
 Ser Met Thr Thr Thr Arg Thr Pro Asp Thr Ser Thr Met His Leu Ala  
 130 135 140  
 Thr Ser Arg Thr Pro Ala Ser Leu Ser Gly Pro Thr Thr Ala Ser Pro  
 145 150 155 160  
 Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr Asn Leu Arg Tyr  
 165 170 175  
 Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu  
 180 185 190  
 Arg Val Leu Gln Gly Leu Leu Arg Pro Val Phe Lys Asn Thr Ser Val  
 195 200 205  
 Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Lys Lys  
 210 215 220  
 Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr Arg Pro Asp  
 225 230 235 240  
 Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser  
 245 250 255  
 Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr Gln Asp Arg  
 260 265 270  
 Asp Ser Leu Tyr Asn Val Gly Phe Thr Gln Arg Ser Ser Val Pro Thr  
 275 280 285  
 Thr Ser Val Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly Thr  
 290 295 300  
 Pro Val Ser Lys Pro Gly Pro Ser Ala Ala Ser Pro Leu Leu Val Leu  
 305 310 315 320  
 Phe Thr Leu Asn Gly Thr Ile Thr Asn Leu Arg Tyr Glu Glu Asn Met  
 325 330 335  
 Gln His Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln  
 340 345 350  
 Gly Leu Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr  
 355 360 365  
 Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asp Gly Thr Ala  
 370 375 380  
 Thr Gly Val Asp Ala Ile Cys Thr His His Pro Asp Pro Lys Ser Pro  
 385 390 395 400  
 Arg Leu Asp Arg Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His

405 410 415  
 Asn Ile Thr Glu Leu Gly His Tyr Ala Leu Asp Asn Asp Ser Leu Phe  
 420 425 430  
 Val Asn Gly Phe Thr His Arg Ser Ser Val Ser Thr Thr Ser Thr Pro  
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 Gly Thr Pro Thr Val Tyr Leu Gly Ala Ser Lys Thr Pro Ala Ser Ile  
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 Phe Gly Pro Ser  
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 Ile Arg Pro Val Lys Gly Pro Gln Thr Ser Thr Ser Pro Ala Ser Pro  
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 Lys Gly Leu His Thr Gly Gly Thr Lys Arg Met Glu Thr Thr Thr Thr  
 35 40 45  
 Ala Leu Lys Thr Thr Thr Thr Ala Leu Lys Thr Thr Ser Arg Ala Thr  
 50 55 60  
 Leu Thr Thr Ser Val Tyr Thr Pro Thr Leu Gly Thr Leu Thr Pro Leu  
 65 70 75 80  
 Asn Ala Ser Arg Gln Met Ala Ser Thr Ile Leu Thr Glu Met Met Ile  
 85 90 95  
 Thr Thr Pro Tyr Val Phe Pro Asp Val Pro Glu Thr Thr Ser Ser Leu  
 100 105 110  
 Ala Thr Ser Leu Gly Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr  
 115 120 125



Pro Ser Val Leu Asn Arg Glu Ser Glu Thr Thr Ala Ser Leu Val Ser  
 130 135 140  
 Arg Ser Gly Ala Glu Arg Ser Pro Val Ile Gln Thr Leu Asp Val Ser  
 145 150 155 160  
 Ser Ser Glu Pro Asp Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu  
 165 170 175  
 Thr Ile Pro Thr Val Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu  
 180 185 190  
 Leu Asp Thr Val Ser Ser Thr Ala Thr Ser His Gly Ala Asp Val Ser  
 195 200 205  
 Ser Ala Ile Pro Thr Asn Ile Ser Pro Ser Glu Leu Asp Ala Leu Thr  
 210 215 220  
 Pro Leu Val Thr Ile Ser Gly Thr Asp Thr Ser Thr Thr Phe Pro Thr  
 225 230 235 240  
 Leu Thr Lys Ser Pro His Glu Thr Glu Thr Arg Thr Thr Trp Leu Thr  
 245 250 255  
 His Pro Ala Glu Thr Ser Ser Thr Ile Pro Arg Thr Ile Pro Asn Phe  
 260 265 270  
 Ser His His Glu Ser Asp Ala Thr Pro Ser Ile Ala Thr Ser Pro Gly  
 275 280 285  
 Ala Glu Thr Ser Ser Ala Ile Pro Ile Met Thr Val Ser Pro Gly Ala  
 290 295 300  
 Glu Asp Leu Val Thr Ser Gln Val Thr Ser Ser Gly Thr Asp Arg Asn  
 305 310 315 320  
 Met Thr Ile Pro Thr Leu Thr Leu Ser Pro Gly Glu Pro Lys Thr Ile  
 325 330 335  
 Ala Ser Leu Val Thr His Pro Glu Ala Gln Thr Ser Ser Ala Ile Pro  
 340 345 350  
 Thr Ser Thr Ile Ser Pro Ala Val Ser Arg Leu Val Thr Ser Met Val  
 355 360 365  
 Thr Ser Leu Ala Ala Lys Thr Ser Thr Thr Asn Arg Ala Leu Thr Asn  
 370 375 380  
 Ser Pro Gly Glu Pro Ala Thr Thr Val Ser Leu Val Thr His Pro Ala  
 385 390 395 400  
 Gln Thr Ser Pro Thr Val Pro Trp Thr Thr Ser Ile Phe Phe His Ser  
 405 410 415  
 Lys Ser Asp Thr Thr Pro Ser Met Thr Thr Ser His Gly Ala Glu Ser  
 420 425 430  
 Ser Ser Ala Val Pro Thr Pro Thr Val Ser Thr Glu Val Pro Gly Val

435	440	445
Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val Ile Ser Thr Thr Ile		
450	455	460
Pro Ile Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met		
465	470	475 480
Ala Thr Ser His Gly Glu Glu Ala Ser Ser Ala Ile Pro Thr Pro Thr		
485	490	495
Val Ser Pro Gly Val Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser		
500	505	510
Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr Phe Ser Leu Gly		
515	520	525
Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His Gly Thr Glu Ala		
530	535	540
Gly Ser Ala Val Pro Thr Val Leu Pro Glu Val Pro Gly Met Val Thr		
545	550	555 560
Ser Leu Val Ala Ser Ser Arg Ala Val Thr Ser Thr Thr Leu Pro Thr		
565	570	575
Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met Ala Thr		
580	585	590
Ser His Gly Ala Glu Ala Ser Ser Thr Val Pro Thr Val Ser Pro Glu		
595	600	605
Val Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser Ser Gly Val Asn		
610	615	620
Ser Thr Ser Ile Pro Thr Leu Ile Leu Ser Pro Gly Glu Leu Glu Thr		
625	630	635 640
Thr Pro Ser Met Ala Thr Ser His Gly Ala Glu Ala Ser Ser Ala Val		
645	650	655
Pro Thr Pro Thr Val Ser Pro Gly Val Ser Gly Val Val Thr Pro Leu		
660	665	670
Val Thr Ser Ser Arg Ala Val Thr Ser Thr Thr Ile Pro Ile Leu Thr		
675	680	685
Leu Ser Ser Ser Glu Pro Glu Thr Thr Pro Ser Met Ala Thr Ser His		
690	695	700
Gly Val Glu Ala Ser Ser Ala Val Leu Thr Val Ser Pro Glu Val Pro		
705	710	715 720
Gly Met Val Thr Ser Leu Val Thr Ser Ser Arg Ala Val Thr Ser Thr		
725	730	735
Thr Ile Pro Thr Leu Thr Ile Ser Ser Asp Glu Pro Glu Thr Thr Thr		
740	745	750

Ser Leu Val Thr His Ser Glu Ala Lys Met Ile Ser Ala Ile Pro Thr  
 755 760 765  
 Leu Ala Val Ser Pro Thr Val Gln Gly Leu Val Thr Ser Leu Val Thr  
 770 775 780  
 Ser Ser Gly Ser Glu Thr Ser Ala Phe Ser Asn Leu Thr Val Ala Ser  
 785 790 795 800  
 Ser Gln Pro Glu Thr Ile Asp Ser Trp Val Ala His Pro Gly Thr Glu  
 805 810 815  
 Ala Ser Ser Val Val Pro Thr Leu Thr Val Ser Thr Gly Glu Pro Phe  
 820 825 830  
 Thr Asn Ile Ser Leu Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu  
 835 840 845  
 Pro Arg Thr Thr Ser Arg Phe Ser His Ser Glu Leu Asp Thr Met Pro  
 850 855 860  
 Ser Thr Val Thr Ser Pro Glu Ala Glu Ser Ser Ser Ala Ile Ser Thr  
 865 870 875 880  
 Thr Ile Ser Pro Gly Ile Pro Gly Val Leu Thr Ser Leu Val Thr Ser  
 885 890 895  
 Ser Gly Arg Asp Ile Ser Ala Thr Phe Pro Thr Val Pro Glu Ser Pro  
 900 905 910  
 His Glu Ser Glu Ala Thr Ala Ser Trp Val Thr His Pro Ala Val Thr  
 915 920 925  
 Ser Thr Thr Val Pro Arg Thr Thr Pro Asn Tyr Ser His Ser Glu Pro  
 930 935 940  
 Asp Thr Thr Pro Ser Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr Ser  
 945 950 955 960  
 Asp Phe Pro Thr Ile Thr Val Ser Pro Asp Val Pro Asp Met Val Thr  
 965 970 975  
 Ser Gln Val Thr Ser Ser Gly Thr Asp Thr Ser Ile Thr Ile Pro Thr  
 980 985 990  
 Leu Thr Leu Ser Ser Gly Glu Pro Glu Thr Thr Thr Ser Phe Ile Thr  
 995 1000 1005  
 Tyr Ser Glu Thr His Thr Ser Ser Ala Ile Pro Thr Leu Pro Val  
 1010 1015 1020  
 Ser Pro Gly Ala Ser Lys Met Leu Thr Ser Leu Val Ile Ser Ser  
 1025 1030 1035  
 Gly Thr Asp Ser Thr Thr Thr Phe Pro Thr Leu Thr Glu Thr Pro  
 1040 1045 1050  
 Tyr Glu Pro Glu Thr Thr Ala Ile Gln Leu Ile His Pro Ala Glu  
 1055 1060 1065

Thr	Asn	Thr	Met	Val	Pro	Arg	Thr	Thr	Pro	Lys	Phe	Ser	His	Ser
1070						1075					1080			
Lys	Ser	Asp	Thr	Thr	Leu	Pro	Val	Ala	Ile	Thr	Ser	Pro	Gly	Pro
1085						1090					1095			
Glu	Ala	Ser	Ser	Ala	Val	Ser	Thr	Thr	Thr	Ile	Ser	Pro	Asp	Met
1100						1105					1110			
Ser	Asp	Leu	Val	Thr	Ser	Leu	Val	Pro	Ser	Ser	Gly	Thr	Asp	Thr
1115						1120					1125			
Ser	Thr	Thr	Phe	Pro	Thr	Leu	Ser	Glu	Thr	Pro	Tyr	Glu	Pro	Glu
1130						1135					1140			
Thr	Thr	Ala	Thr	Trp	Leu	Thr	His	Pro	Ala	Glu	Thr	Ser	Thr	Thr
1145						1150					1155			
Val	Ser	Gly	Thr	Ile	Pro	Asn	Phe	Ser	His	Arg	Gly	Ser	Asp	Thr
1160						1165					1170			
Ala	Pro	Ser	Met	Val	Thr	Ser	Pro	Gly	Val	Asp	Thr	Arg	Ser	Gly
1175						1180					1185			
Val	Pro	Thr	Thr	Thr	Ile	Pro	Pro	Ser	Ile	Pro	Gly	Val	Val	Thr
1190						1195					1200			
Ser	Gln	Val	Thr	Ser	Ser	Ala	Thr	Asp	Thr	Ser	Thr	Ala	Ile	Pro
1205						1210					1215			
Thr	Leu	Thr	Pro	Ser	Pro	Gly	Glu	Pro	Glu	Thr	Thr	Ala	Ser	Ser
1220						1225					1230			
Ala	Thr	His	Pro	Gly	Thr	Gln	Thr	Gly	Phe	Thr	Val	Pro	Ile	Arg
1235						1240					1245			
Thr	Val	Pro	Ser	Ser	Glu	Pro	Asp	Thr	Met	Ala	Ser	Trp	Val	Thr
1250						1255					1260			
His	Pro	Pro	Gln	Thr	Ser	Thr	Pro	Val	Ser	Arg	Thr	Thr	Ser	Ser
1265						1270					1275			
Phe	Ser	His	Ser	Ser	Pro	Asp	Ala	Thr	Pro	Val	Met	Ala	Thr	Ser
1280						1285					1290			
Pro	Arg	Thr	Glu	Ala	Ser	Ser	Ala	Val	Leu	Thr	Thr	Ile	Ser	Pro
1295						1300					1305			
Gly	Ala	Pro	Glu	Met	Val	Thr	Ser	Gln	Ile	Thr	Ser	Ser	Gly	Ala
1310						1315					1320			
Ala	Thr	Ser	Thr	Thr	Val	Pro	Thr	Leu	Thr	His	Ser	Pro	Gly	Met
1325						1330					1335			
Pro	Glu	Thr	Thr	Ala	Leu	Leu	Ser	Thr	His	Pro	Arg	Thr	Glu	Thr
1340						1345					1350			
Ser	Lys	Thr	Phe	Pro	Ala	Ser	Thr	Val	Phe	Pro	Gln	Val	Ser	Glu

1355	1360	1365
Thr Thr Ala Ser Leu Thr	Ile Arg Pro Gly Ala Glu	Thr Ser Thr
1370	1375	1380
Ala Leu Pro Thr Gln Thr	Thr Ser Ser Leu Phe Thr	Leu Leu Val
1385	1390	1395
Thr Gly Thr Ser Arg Val	Asp Leu Ser Pro Thr Ala	Ser Pro Gly
1400	1405	1410
Val Ser Ala Lys Thr Ala	Pro Leu Ser Thr His Pro	Gly Thr Glu
1415	1420	1425
Thr Ser Thr Met Ile Pro	Thr Ser Thr Leu Ser Leu	Gly Leu Leu
1430	1435	1440
Glu Thr Thr Gly Leu Leu	Ala Thr Ser Ser Ser Ala	Glu Thr Ser
1445	1450	1455
Thr Ser Thr Leu Thr Leu	Thr Val Ser Pro Ala Val	Ser Gly Leu
1460	1465	1470
Ser Ser Ala Ser Ile Thr	Thr Asp Lys Pro Gln Thr	Val Thr Ser
1475	1480	1485
Trp Asn Thr Glu Thr Ser	Pro Ser Val Thr Ser Val	Gly Pro Pro
1490	1495	1500
Glu Phe Ser Arg Thr Val	Thr Gly Thr Thr Met Thr	Leu Ile Pro
1505	1510	1515
Ser Glu Met Pro Thr Pro	Pro Lys Thr Ser His Gly	Glu Gly Val
1520	1525	1530
Ser Pro Thr Thr Ile Leu	Arg Thr Thr Met Val Glu	Ala Thr Asn
1535	1540	1545
Leu Ala Thr Thr Gly Ser	Ser Pro Thr Val Ala Lys	Thr Thr Thr
1550	1555	1560
Thr Phe Asn Thr Leu Ala	Gly Ser Leu Phe Thr Pro	Leu Thr Thr
1565	1570	1575
Pro Gly Met Ser Thr Leu	Ala Ser Glu Ser Val Thr	Ser Arg Thr
1580	1585	1590
Ser Tyr Asn His Arg Ser	Trp Ile Ser Thr Thr Ser	Ser Tyr Asn
1595	1600	1605
Arg Arg Tyr Trp Thr Pro	Ala Thr Ser Thr Pro Val	Thr Ser Thr
1610	1615	1620
Phe Ser Pro Gly Ile Ser	Thr Ser Ser Ile Pro Ser	Ser Thr Ala
1625	1630	1635
Ala Thr Val Pro Phe Met	Val Pro Phe Thr Leu Asn	Phe Thr Ile
1640	1645	1650

Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg
1655						1660					1665			
Lys	Phe	Asn	Ala	Thr	Glu	Arg	Glu	Leu	Gln	Gly	Leu	Leu	Lys	Pro
1670						1675					1680			
Leu	Phe	Arg	Asn	Ser	Ser	Leu	Glu	Tyr	Leu	Tyr	Ser	Gly	Cys	Arg
1685						1690					1695			
Leu	Ala	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Ser	Ser	Ala	Met	Ala	Val
1700						1705					1710			
Asp	Ala	Ile	Cys	Thr	His	Arg	Pro	Asp	Pro	Glu	Asp	Leu	Gly	Leu
1715						1720					1725			
Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Asn	Leu	Thr	Asn	Gly
1730						1735					1740			
Ile	Gln	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr
1745						1750					1755			
Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Met	Pro	Thr	Thr	Ser	Thr
1760						1765					1770			
Pro	Gly	Thr	Ser	Thr	Val	Asp	Val	Gly	Thr	Ser	Gly	Thr	Pro	Ser
1775						1780					1785			
Ser	Ser	Pro	Ser	Pro	Thr	Ala	Ala	Gly	Pro	Leu	Leu	Met	Pro	Phe
1790						1795					1800			
Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met
1805						1810					1815			
Arg	Arg	Thr	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Met	Glu	Ser	Val	Leu
1820						1825					1830			
Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro
1835						1840					1845			
Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp
1850						1855					1860			
Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp
1865						1870					1875			
Pro	Lys	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu
1880						1885					1890			
Ser	Lys	Leu	Thr	Asn	Asp	Ile	Glu	Glu	Leu	Gly	Pro	Tyr	Thr	Leu
1895						1900					1905			
Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Ser	Ser
1910						1915					1920			
Val	Ser	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Arg
1925						1930					1935			
Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Ser	Ser	Pro	Thr	Ile	Met	Ala
1940						1945					1950			

Ala Gly	Pro Leu Leu Val	Pro	Phe Thr Leu Asn	Phe	Thr Ile Thr
1955		1960		1965	
Asn Leu	Gln Tyr Gly Glu	Asp	Met Gly His Pro	Gly	Ser Arg Lys
1970		1975		1980	
Phe Asn	Thr Thr Glu Arg	Val	Leu Gln Gly Leu	Leu	Gly Pro Ile
1985		1990		1995	
Phe Lys	Asn Thr Ser Val	Gly	Pro Leu Tyr Ser	Gly	Cys Arg Leu
2000		2005		2010	
Thr Ser	Leu Arg Ser Glu	Lys	Asp Gly Ala Ala	Thr	Gly Val Asp
2015		2020		2025	
Ala Ile	Cys Ile His His	Leu	Asp Pro Lys Ser	Pro	Gly Leu Asn
2030		2035		2040	
Arg Glu	Arg Leu Tyr Trp	Glu	Leu Ser Gln Leu	Thr	Asn Gly Ile
2045		2050		2055	
Lys Glu	Leu Gly Pro Tyr	Thr	Leu Asp Arg Asn	Ser	Leu Tyr Val
2060		2065		2070	
Asn Gly	Phe Thr His Arg	Thr	Ser Val Pro Thr	Ser	Ser Thr Pro
2075		2080		2085	
Gly Thr	Ser Thr Val Asp	Leu	Gly Thr Ser Gly	Thr	Pro Phe Ser
2090		2095		2100	
Leu Pro	Ser Pro Ala Thr	Ala	Gly Pro Leu Leu	Val	Leu Phe Thr
2105		2110		2115	
Leu Asn	Phe Thr Ile Thr	Asn	Leu Lys Tyr Glu	Glu	Asp Met His
2120		2125		2130	
Arg Pro	Gly Ser Arg Lys	Phe	Asn Thr Thr Glu	Arg	Val Leu Gln
2135		2140		2145	
Thr Leu	Leu Gly Pro Met	Phe	Lys Asn Thr Ser	Val	Gly Leu Leu
2150		2155		2160	
Tyr Ser	Gly Cys Arg Leu	Thr	Leu Leu Arg Ser	Glu	Lys Asp Gly
2165		2170		2175	
Ala Ala	Thr Gly Val Asp	Ala	Ile Cys Thr His	Arg	Leu Asp Pro
2180		2185		2190	
Lys Ser	Pro Gly Leu Asp	Arg	Glu Gln Leu Tyr	Trp	Glu Leu Ser
2195		2200		2205	
Gln Leu	Thr Asn Gly Ile	Lys	Glu Leu Gly Pro	Tyr	Thr Leu Asp
2210		2215		2220	
Arg Asn	Ser Leu Tyr Val	Asn	Gly Phe Thr His	Trp	Ile Pro Val
2225		2230		2235	
Pro Thr	Ser Ser Thr Pro	Gly	Thr Ser Thr Val	Asp	Leu Gly Ser

2240	2245	2250
Gly Thr Pro Ser Ser Leu 2255	Pro Ser Pro Thr Ala 2260	Ala Gly Pro Leu 2265
Leu Val Pro Phe Thr Leu 2270	Asn Phe Thr Ile Thr 2275	Asn Leu Gln Tyr 2280
Glu Glu Asp Met His His 2285	Pro Gly Ser Arg Lys 2290	Phe Asn Thr Thr 2295
Glu Arg Val Leu Gln Gly 2300	Leu Leu Gly Pro Met 2305	Phe Lys Asn Thr 2310
Ser Val Gly Leu Leu Tyr 2315	Ser Gly Cys Arg Leu 2320	Thr Leu Leu Arg 2325
Ser Glu Lys Asp Gly Ala 2330	Ala Thr Gly Val Asp 2335	Ala Ile Cys Thr 2340
His Arg Leu Asp Pro Lys 2345	Ser Pro Gly Val Asp 2350	Arg Glu Gln Leu 2355
Tyr Trp Glu Leu Ser Gln 2360	Leu Thr Asn Gly Ile 2365	Lys Glu Leu Gly 2370
Pro Tyr Thr Leu Asp Arg 2375	Asn Ser Leu Tyr Val 2380	Asn Gly Phe Thr 2385
His Gln Thr Ser Ala Pro 2390	Asn Thr Ser Thr Pro 2395	Gly Thr Ser Thr 2400
Val Asp Leu Gly Thr Ser 2405	Gly Thr Pro Ser Ser 2410	Leu Pro Ser Pro 2415
Thr Ser Ala Gly Pro Leu 2420	Leu Val Pro Phe Thr 2425	Leu Asn Phe Thr 2430
Ile Thr Asn Leu Gln Tyr 2435	Glu Glu Asp Met Arg 2440	His Pro Gly Ser 2445
Arg Lys Phe Asn Thr Thr 2450	Glu Arg Val Leu Gln 2455	Gly Leu Leu Lys 2460
Pro Leu Phe Lys Ser Thr 2465	Ser Val Gly Pro Leu 2470	Tyr Ser Gly Cys 2475
Arg Leu Thr Leu Leu Arg 2480	Ser Glu Lys Asp Gly 2485	Ala Ala Thr Gly 2490
Val Asp Ala Ile Cys Thr 2495	His Arg Leu Asp Pro 2500	Lys Ser Pro Gly 2505
Val Asp Arg Glu Gln Leu 2510	Tyr Trp Glu Leu Ser 2515	Gln Leu Thr Asn 2520
Gly Ile Lys Glu Leu Gly 2525	Pro Tyr Thr Leu Asp 2530	Arg Asn Ser Leu 2535



Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Thr	Ser	Ala	Pro	Asn	Thr	Ser
2540						2545					2550			
Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro
2555						2560					2565			
Ser	Ser	Leu	Pro	Ser	Pro	Thr	Ser	Ala	Gly	Pro	Leu	Leu	Val	Pro
2570						2575					2580			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp
2585						2590					2595			
Met	His	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
2600						2605					2610			
Leu	Gln	Gly	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly
2615						2620					2625			
Leu	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys
2630						2635					2640			
Asn	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Ile	Cys	Ser	His	Arg	Leu
2645						2650					2655			
Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp	Glu
2660						2665					2670			
Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr
2675						2680					2685			
Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser
2690						2695					2700			
Ser	Val	Ala	Pro	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu
2705						2710					2715			
Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser	Pro	Thr	Thr	Ala
2720						2725					2730			
Val	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn
2735						2740					2745			
Leu	Gln	Tyr	Gly	Glu	Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe
2750						2755					2760			
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Gly	Pro	Leu	Phe
2765						2770					2775			
Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Ile
2780						2785					2790			
Ser	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala
2795						2800					2805			
Ile	Cys	Thr	His	His	Leu	Asn	Pro	Gln	Ser	Pro	Gly	Leu	Asp	Arg
2810						2815					2820			
Glu	Gln	Leu	Tyr	Trp	Gln	Leu	Ser	Gln	Met	Thr	Asn	Gly	Ile	Lys
2825						2830					2835			

Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn
2840						2845					2850			
Gly	Phe	Thr	His	Arg	Ser	Ser	Gly	Leu	Thr	Thr	Ser	Thr	Pro	Trp
2855						2860					2865			
Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Pro	Val
2870						2875					2880			
Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu
2885						2890					2895			
Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	His	Arg
2900						2905					2910			
Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ala	Thr	Glu	Arg	Val	Leu	Gln	Gly
2915						2920					2925			
Leu	Leu	Ser	Pro	Ile	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr
2930						2935					2940			
Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala
2945						2950					2955			
Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu	Tyr	His	Pro	Asn	Pro	Lys
2960						2965					2970			
Arg	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln
2975						2980					2985			
Leu	Thr	His	Asn	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Ser	Leu	Asp	Arg
2990						2995					3000			
Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Asn	Ser	Val	Pro
3005						3010					3015			
Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Tyr	Trp	Ala	Thr	Thr
3020						3025					3030			
Gly	Thr	Pro	Ser	Ser	Phe	Pro	Gly	His	Thr	Glu	Pro	Gly	Pro	Leu
3035						3040					3045			
Leu	Ile	Pro	Phe	Thr	Phe	Asn	Phe	Thr	Ile	Thr	Asn	Leu	His	Tyr
3050						3055					3060			
Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr
3065						3070					3075			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr
3080						3085					3090			
Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg
3095						3100					3105			
Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu
3110						3115					3120			
Tyr	His	Pro	Asn	Pro	Lys	Arg	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu

	3125					3130					3135				
Tyr	Cys 3140	Glu	Leu	Ser	Gln	Leu 3145	Thr	His	Asn	Ile	Thr 3150	Glu	Leu	Gly	
Pro	Tyr 3155	Ser	Leu	Asp	Arg	Asp 3160	Ser	Leu	Tyr	Val	Asn 3165	Gly	Phe	Thr	
His	Gln 3170	Asn	Ser	Val	Pro	Thr 3175	Thr	Ser	Thr	Pro	Gly 3180	Thr	Ser	Thr	
Val	Tyr 3185	Trp	Ala	Thr	Thr	Gly 3190	Thr	Pro	Ser	Ser	Phe 3195	Pro	Gly	His	
Thr	Glu 3200	Pro	Gly	Pro	Leu	Leu 3205	Ile	Pro	Phe	Thr	Phe 3210	Asn	Phe	Thr	
Ile	Thr 3215	Asn	Leu	His	Tyr	Glu 3220	Glu	Asn	Met	Gln	His 3225	Pro	Gly	Ser	
Arg	Lys 3230	Phe	Asn	Thr	Thr	Glu 3235	Arg	Val	Leu	Gln	Gly 3240	Leu	Leu	Lys	
Pro	Leu 3245	Phe	Lys	Asn	Thr	Ser 3250	Val	Gly	Pro	Leu	Tyr 3255	Ser	Gly	Cys	
Arg	Leu 3260	Thr	Leu	Leu	Arg	Pro 3265	Glu	Lys	His	Glu	Ala 3270	Ala	Thr	Gly	
Val	Asp 3275	Thr	Ile	Cys	Thr	His 3280	Arg	Val	Asp	Pro	Ile 3285	Gly	Pro	Gly	
Leu	Asp 3290	Arg	Glu	Arg	Leu	Tyr 3295	Trp	Glu	Leu	Ser	Gln 3300	Leu	Thr	Asn	
Ser	Ile 3305	Thr	Glu	Leu	Gly	Pro 3310	Tyr	Thr	Leu	Asp	Arg 3315	Asp	Ser	Leu	
Tyr	Val 3320	Asn	Gly	Phe	Asn	Pro 3325	Arg	Ser	Ser	Val	Pro 3330	Thr	Thr	Ser	
Thr	Pro 3335	Gly	Thr	Ser	Thr	Val 3340	His	Leu	Ala	Thr	Ser 3345	Gly	Thr	Pro	
Ser	Ser 3350	Leu	Pro	Gly	His	Thr 3355	Ala	Pro	Val	Pro	Leu 3360	Leu	Ile	Pro	
Phe	Thr 3365	Leu	Asn	Phe	Thr	Ile 3370	Thr	Asn	Leu	His	Tyr 3375	Glu	Glu	Asn	
Met	Gln 3380	His	Pro	Gly	Ser	Arg 3385	Lys	Phe	Asn	Thr	Thr 3390	Glu	Arg	Val	
Leu	Gln 3395	Gly	Leu	Leu	Lys	Pro 3400	Leu	Phe	Lys	Asn	Thr 3405	Ser	Val	Gly	
Pro	Leu 3410	Tyr	Ser	Gly	Cys	Arg 3415	Leu	Thr	Leu	Leu	Arg 3420	Pro	Glu	Lys	

His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His Arg Val	3425	3430	3435
Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu	3440	3445	3450
Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa	3455	3460	3465
Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa	3470	3475	3480
Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu	3485	3490	3495
Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Ser Ala	3500	3505	3510
Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn	3515	3520	3525
Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe	3530	3535	3540
Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe	3545	3550	3555
Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr	3560	3565	3570
Leu Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala	3575	3580	3585
Ile Cys Ser His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg	3590	3595	3600
Glu Gln Leu Tyr Trp Glu Leu Ser Gln Leu Thr His Gly Ile Lys	3605	3610	3615
Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr Val Asn	3620	3625	3630
Gly Phe Thr His Arg Ser Ser Val Ala Pro Thr Ser Thr Pro Gly	3635	3640	3645
Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser Leu	3650	3655	3660
Pro Ser Pro Thr Thr Ala Val Pro Leu Leu Val Pro Phe Thr Leu	3665	3670	3675
Asn Phe Thr Ile Thr Asn Leu Gln Tyr Gly Glu Asp Met Arg His	3680	3685	3690
Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly	3695	3700	3705
Leu Leu Gly Pro Leu Phe Lys Asn Ser Ser Val Gly Pro Leu Tyr	3710	3715	3720

Ser	Gly	Cys	Arg	Leu	Ile	Ser	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala
3725						3730					3735			
Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	His	Leu	Asn	Pro	Gln
3740						3745					3750			
Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Gln	Leu	Ser	Gln
3755						3760					3765			
Met	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg
3770						3775					3780			
Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Gly	Leu
3785						3790					3795			
Thr	Thr	Ser	Thr	Pro	Trp	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser
3800						3805					3810			
Gly	Thr	Pro	Ser	Pro	Val	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu
3815						3820					3825			
Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr
3830						3835					3840			
Glu	Glu	Asp	Met	His	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ala	Thr
3845						3850					3855			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Ser	Pro	Ile	Phe	Lys	Asn	Ser
3860						3865					3870			
Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg
3875						3880					3885			
Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Met	Asp	Ala	Val	Cys	Leu
3890						3895					3900			
Tyr	His	Pro	Asn	Pro	Lys	Arg	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu
3905						3910					3915			
Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	His	Asn	Ile	Thr	Glu	Leu	Gly
3920						3925					3930			
Pro	Tyr	Ser	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr
3935						3940					3945			
His	Gln	Ser	Ser	Met	Thr	Thr	Thr	Arg	Thr	Pro	Asp	Thr	Ser	Thr
3950						3955					3960			
Met	His	Leu	Ala	Thr	Ser	Arg	Thr	Pro	Ala	Ser	Leu	Ser	Gly	Pro
3965						3970					3975			
Thr	Thr	Ala	Ser	Pro	Leu	Leu	Val	Leu	Phe	Thr	Ile	Asn	Cys	Thr
3980						3985					3990			
Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	Arg	Thr	Gly	Ser
3995						4000					4005			
Arg	Lys	Phe	Asn	Thr	Met	Glu	Ser	Val	Leu	Gln	Gly	Leu	Leu	Lys

4010	4015	4020
Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly Cys		
4025	4030	4035
Arg Leu Thr Leu Leu Arg Pro Lys Lys Asp Gly Ala Ala Thr Gly		
4040	4045	4050
Val Asp Ala Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly		
4055	4060	4065
Leu Asn Arg Glu Gln Leu Tyr Trp Glu Leu Ser Lys Leu Thr Asn		
4070	4075	4080
Asp Ile Glu Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu		
4085	4090	4095
Tyr Val Asn Gly Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser		
4100	4105	4110
Thr Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro		
4115	4120	4125
Ser Ser Leu Ser Ser Pro Thr Ile Met Xaa Xaa Xaa Pro Leu Leu		
4130	4135	4140
Xaa Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu		
4145	4150	4155
Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu		
4160	4165	4170
Arg Val Leu Gln Gly Leu Leu Arg Pro Leu Phe Lys Asn Thr Ser		
4175	4180	4185
Val Ser Ser Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro		
4190	4195	4200
Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Ala Cys Thr Tyr		
4205	4210	4215
Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr		
4220	4225	4230
Trp Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro		
4235	4240	4245
Tyr Thr Leu Asp Arg Val Ser Leu Tyr Val Asn Gly Phe Asn Pro		
4250	4255	4260
Arg Ser Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val		
4265	4270	4275
His Leu Ala Thr Ser Gly Thr Pro Ser Ser Leu Pro Gly His Thr		
4280	4285	4290
Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile		
4295	4300	4305

Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly	Ser	Arg
4310						4315					4320			
Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro
4325						4330					4335			
Leu	Phe	Arg	Asn	Ser	Ser	Leu	Glu	Tyr	Leu	Tyr	Ser	Gly	Cys	Arg
4340						4345					4350			
Leu	Ala	Ser	Leu	Arg	Pro	Glu	Lys	Asp	Ser	Ser	Ala	Met	Ala	Val
4355						4360					4365			
Asp	Ala	Ile	Cys	Thr	His	Arg	Pro	Asp	Pro	Glu	Asp	Leu	Gly	Leu
4370						4375					4380			
Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Asn	Leu	Thr	Asn	Gly
4385						4390					4395			
Ile	Gln	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr
4400						4405					4410			
Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Phe	Leu	Thr	Thr	Ser	Thr
4415						4420					4425			
Pro	Trp	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser
4430						4435					4440			
Pro	Val	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro	Phe
4445						4450					4455			
Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met
4460						4465					4470			
His	Arg	Pro	Gly	Ser	Arg	Arg	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu
4475						4480					4485			
Gln	Gly	Leu	Leu	Thr	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro
4490						4495					4500			
Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Gln
4505						4510					4515			
Glu	Ala	Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Val	Asp
4520						4525					4530			
Pro	Ile	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu
4535						4540					4545			
Ser	Gln	Leu	Thr	Asn	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu
4550						4555					4560			
Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Asn	Pro	Trp	Ser	Ser
4565						4570					4575			
Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	His	Leu	Ala
4580						4585					4590			
Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Val
4595						4600					4605			

Pro	Leu	Leu	Ile	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asp	Leu
	4610					4615					4620			
His	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn
	4625					4630					4635			
Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys
	4640					4645					4650			
Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu
	4655					4660					4665			
Leu	Arg	Pro	Glu	Lys	His	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile
	4670					4675					4680			
Cys	Thr	Leu	Arg	Leu	Asp	Pro	Thr	Gly	Pro	Gly	Leu	Asp	Arg	Glu
	4685					4690					4695			
Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Ser	Val	Thr	Glu
	4700					4705					4710			
Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly
	4715					4720					4725			
Phe	Thr	His	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr
	4730					4735					4740			
Ser	Ala	Val	His	Leu	Glu	Thr	Ser	Gly	Thr	Pro	Ala	Ser	Leu	Pro
	4745					4750					4755			
Gly	His	Thr	Ala	Pro	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn
	4760					4765					4770			
Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	Arg	His	Pro
	4775					4780					4785			
Gly	Ser	Arg	Lys	Phe	Ser	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu
	4790					4795					4800			
Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr	Ser
	4805					4810					4815			
Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala	Ala
	4820					4825					4830			
Thr	Arg	Val	Asp	Ala	Val	Cys	Thr	His	Arg	Pro	Asp	Pro	Lys	Ser
	4835					4840					4845			
Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Lys	Leu	Ser	Gln	Leu
	4850					4855					4860			
Thr	His	Gly	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	His
	4865					4870					4875			
Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Gln	Ser	Ser	Met	Thr	Thr
	4880					4885					4890			
Thr	Arg	Thr	Pro	Asp	Thr	Ser	Thr	Met	His	Leu	Ala	Thr	Ser	Arg



4895	4900	4905
Thr Pro Ala Ser Leu Ser Gly 4910	Pro Thr Thr Ala Ser 4915	Pro Leu Leu 4920
Val Leu Phe Thr Ile Asn Phe 4925	Thr Ile Thr Asn Gln 4930	Arg Tyr Glu 4935
Glu Asn Met His His Pro Gly 4940	Ser Arg Lys Phe Asn 4945	Thr Thr Glu 4950
Arg Val Leu Gln Gly Leu Leu 4955	Arg Pro Val Phe Lys 4960	Asn Thr Ser 4965
Val Gly Pro Leu Tyr Ser Gly 4970	Cys Arg Leu Thr Leu 4975	Leu Arg Pro 4980
Lys Lys Asp Gly Ala Ala Thr 4985	Lys Val Asp Ala Ile 4990	Cys Thr Tyr 4995
Arg Pro Asp Pro Lys Ser Pro 5000	Gly Leu Asp Arg Glu 5005	Gln Leu Tyr 5010
Trp Glu Leu Ser Gln Leu Thr 5015	His Ser Ile Thr Glu 5020	Leu Gly Pro 5025
Tyr Thr Gln Asp Arg Asp Ser 5030	Leu Tyr Val Asn Gly 5035	Phe Thr His 5040
Arg Ser Ser Val Pro Thr Thr 5045	Ser Ile Pro Gly Thr 5050	Ser Ala Val 5055
His Leu Glu Thr Ser Gly Thr 5060	Pro Ala Ser Leu Pro 5065	Gly His Thr 5070
Ala Pro Gly Pro Leu Leu Val 5075	Pro Phe Thr Leu Asn 5080	Phe Thr Ile 5085
Thr Asn Leu Gln Tyr Glu Glu 5090	Asp Met Arg His Pro 5095	Gly Ser Arg 5100
Lys Phe Asn Thr Thr Glu Arg 5105	Val Leu Gln Gly Leu 5110	Leu Lys Pro 5115
Leu Phe Lys Ser Thr Ser Val 5120	Gly Pro Leu Tyr Ser 5125	Gly Cys Arg 5130
Leu Thr Leu Leu Arg Pro Glu 5135	Lys Arg Gly Ala Ala 5140	Thr Gly Val 5145
Asp Thr Ile Cys Thr His Arg 5150	Leu Asp Pro Leu Asn 5155	Pro Gly Leu 5160
Asp Arg Glu Gln Leu Tyr Trp 5165	Glu Leu Ser Lys Leu 5170	Thr Arg Gly 5175
Ile Ile Glu Leu Gly Pro Tyr 5180	Leu Leu Asp Arg Gly 5185	Ser Leu Tyr 5190

Val	Asn	Gly	Phe	Thr	His	Arg	Thr	Ser	Val	Pro	Thr	Thr	Ser	Thr
5195						5200					5205			
Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Phe
5210						5215					5220			
Ser	Leu	Pro	Ser	Pro	Ala	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe
5225						5230					5235			
Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met
5240						5245					5250			
Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu
5255						5260					5265			
Gln	Thr	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly	Leu
5270						5275					5280			
Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Ser	Glu	Lys	Asp
5285						5290					5295			
Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp
5300						5305					5310			
Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu
5315						5320					5325			
Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr	Leu
5330						5335					5340			
Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Trp	Ile	Pro
5345						5350					5355			
Val	Pro	Thr	Ser	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly
5360						5365					5370			
Ser	Gly	Thr	Pro	Ser	Leu	Pro	Ser	Ser	Pro	Thr	Thr	Ala	Gly	Pro
5375						5380					5385			
Leu	Leu	Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Lys
5390						5395					5400			
Tyr	Glu	Glu	Asp	Met	His	Cys	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr
5405						5410					5415			
Thr	Glu	Arg	Val	Leu	Gln	Ser	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn
5420						5425					5430			
Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu
5435						5440					5445			
Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys
5450						5455					5460			
Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln
5465						5470					5475			
Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu
5480						5485					5490			

Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly	Phe
5495						5500					5505			
Thr	His	Gln	Thr	Ser	Ala	Pro	Asn	Thr	Ser	Thr	Pro	Gly	Thr	Ser
5510						5515					5520			
Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu	Pro	Ser
5525						5530					5535			
Pro	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe
5540						5545					5550			
Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly
5555						5560					5565			
Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu
5570						5575					5580			
Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr	Ser	Val	Gly	Xaa	Leu	Tyr	Ser	Gly
5585						5590					5595			
Cys	Arg	Leu	Thr	Leu	Leu	Arg	Xaa	Glu	Lys	Xaa	Xaa	Ala	Ala	Thr
5600						5605					5610			
Xaa	Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro
5615						5620					5625			
Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr
5630						5635					5640			
Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser
5645						5650					5655			
Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Trp	Ile	Pro	Val	Pro	Thr	Ser
5660						5665					5670			
Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val	Asp	Leu	Gly	Ser	Gly	Thr	Pro
5675						5680					5685			
Ser	Ser	Leu	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro
5690						5695					5700			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Lys	Tyr	Glu	Glu	Asp
5705						5710					5715			
Met	His	Cys	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
5720						5725					5730			
Leu	Gln	Ser	Leu	Leu	Gly	Pro	Met	Phe	Lys	Asn	Thr	Ser	Val	Gly
5735						5740					5745			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Ser	Leu	Arg	Ser	Glu	Lys
5750						5755					5760			
Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Val
5765						5770					5775			
Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu

5780	5785	5790
Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr 5795 5800 5805		
Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly Phe Thr His Gln Thr 5810 5815 5820		
Ser Ala Pro Asn Thr Ser Thr Pro Gly Thr Ser Thr Val Asp Leu 5825 5830 5835		
Gly Thr Ser Gly Thr Pro Ser Ser Leu Pro Ser Pro Thr Ser Ala 5840 5845 5850		
Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn 5855 5860 5865		
Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe 5870 5875 5880		
Asn Thr Thr Glu Arg Val Leu Gln Gly Leu Leu Gly Pro Met Phe 5885 5890 5895		
Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly Cys Arg Leu Thr 5900 5905 5910		
Leu Leu Arg Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala 5915 5920 5925		
Ile Cys Thr His Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg 5930 5935 5940		
Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa 5945 5950 5955		
Glu Leu Gly Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn 5960 5965 5970		
Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Ser Thr Pro Gly 5975 5980 5985		
Thr Ser Xaa Val Xaa Leu Xaa Thr Ser Gly Thr Pro Xaa Xaa Xaa 5990 5995 6000		
Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu Leu Xaa Pro Phe Thr Leu 6005 6010 6015		
Asn Phe Thr Ile Thr Asn Leu Xaa Tyr Glu Glu Xaa Met Xaa Xaa 6020 6025 6030		
Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly 6035 6040 6045		
Leu Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr 6050 6055 6060		
Ser Gly Cys Arg Leu Ala Ser Leu Arg Pro Glu Lys Asp Ser Ser 6065 6070 6075		

Ala Met	Ala Val	Asp Ala	Ile Cys	Thr His	Arg Pro	Asp Pro	Glu
6080			6085		6090		
Asp Leu	Gly Leu	Asp Arg	Glu Arg	Leu Tyr	Trp Glu	Leu Ser	Asn
6095			6100		6105		
Leu Thr	Asn Gly	Ile Gln	Glu Leu	Gly Pro	Tyr Thr	Leu Asp	Arg
6110			6115		6120		
Asn Ser	Leu Tyr	Val Asn	Gly Phe	Thr His	Arg Ser	Ser Met	Pro
6125			6130		6135		
Thr Thr	Ser Thr	Pro Gly	Thr Ser	Thr Val	Asp Val	Gly Thr	Ser
6140			6145		6150		
Gly Thr	Pro Ser	Ser Ser	Pro Ser	Pro Thr	Thr Ala	Gly Pro	Leu
6155			6160		6165		
Leu Ile	Pro Phe	Thr Leu	Asn Phe	Thr Ile	Thr Asn	Leu Gln	Tyr
6170			6175		6180		
Gly Glu	Asp Met	Gly His	Pro Gly	Ser Arg	Lys Phe	Asn Thr	Thr
6185			6190		6195		
Glu Arg	Val Leu	Gln Gly	Leu Leu	Gly Pro	Ile Phe	Lys Asn	Thr
6200			6205		6210		
Ser Val	Gly Pro	Leu Tyr	Ser Gly	Cys Arg	Leu Thr	Ser Leu	Arg
6215			6220		6225		
Ser Glu	Lys Asp	Gly Ala	Ala Thr	Gly Val	Asp Ala	Ile Cys	Ile
6230			6235		6240		
His His	Leu Asp	Pro Lys	Ser Pro	Gly Leu	Asn Arg	Glu Arg	Leu
6245			6250		6255		
Tyr Trp	Glu Leu	Ser Gln	Leu Thr	Asn Gly	Ile Lys	Glu Leu	Gly
6260			6265		6270		
Pro Tyr	Thr Leu	Asp Arg	Asn Ser	Leu Tyr	Val Asn	Gly Phe	Thr
6275			6280		6285		
His Arg	Thr Ser	Val Pro	Thr Thr	Ser Thr	Pro Gly	Thr Ser	Thr
6290			6295		6300		
Val Asp	Leu Gly	Thr Ser	Gly Thr	Pro Phe	Ser Leu	Pro Ser	Pro
6305			6310		6315		
Ala Thr	Ala Gly	Pro Leu	Leu Val	Leu Phe	Thr Leu	Asn Phe	Thr
6320			6325		6330		
Ile Thr	Asn Leu	Lys Tyr	Glu Glu	Asp Met	His Arg	Pro Gly	Ser
6335			6340		6345		
Arg Lys	Phe Asn	Thr Thr	Glu Arg	Val Leu	Gln Thr	Leu Leu	Gly
6350			6355		6360		
Pro Met	Phe Lys	Asn Thr	Ser Val	Gly Leu	Leu Tyr	Ser Gly	Cys
6365			6370		6375		

Arg	Leu	Thr	Leu	Leu	Arg	Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly
6380						6385					6390			
Val	Asp	Ala	Ile	Cys	Thr	His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly
6395						6400					6405			
Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa
6410						6415					6420			
Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu
6425						6430					6435			
Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser
6440						6445					6450			
Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro
6455						6460					6465			
Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro
6470						6475					6480			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa
6485						6490					6495			
Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
6500						6505					6510			
Leu	Gln	Gly	Leu	Leu	Arg	Pro	Val	Phe	Lys	Asn	Thr	Ser	Val	Gly
6515						6520					6525			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Lys	Lys
6530						6535					6540			
Asp	Gly	Ala	Ala	Thr	Lys	Val	Asp	Ala	Ile	Cys	Thr	Tyr	Arg	Pro
6545						6550					6555			
Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu
6560						6565					6570			
Leu	Ser	Gln	Leu	Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr
6575						6580					6585			
Gln	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser
6590						6595					6600			
Ser	Val	Pro	Thr	Thr	Ser	Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu
6605						6610					6615			
Glu	Thr	Thr	Gly	Thr	Pro	Ser	Ser	Phe	Pro	Gly	His	Thr	Glu	Pro
6620						6625					6630			
Gly	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Phe	Asn	Phe	Thr	Ile	Thr	Asn
6635						6640					6645			
Leu	Arg	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser	Arg	Lys	Phe
6650						6655					6660			
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Thr	Pro	Leu	Phe

6665	6670	6675
Lys Asn Thr Ser Val Gly Pro 6680	Leu Tyr Ser Gly Cys 6685	Arg Leu Thr 6690
Leu Leu Arg Pro Glu Lys 6695	Gln Glu Ala Ala Thr 6700	Gly Val Asp Thr 6705
Ile Cys Thr His Arg Val 6710	Asp Pro Ile Gly Pro 6715	Gly Leu Asp Arg 6720
Glu Arg Leu Tyr Trp Glu 6725	Leu Ser Gln Leu Thr 6730	Asn Ser Ile Thr 6735
Glu Leu Gly Pro Tyr Thr 6740	Leu Asp Arg Asp Ser 6745	Leu Tyr Val Asp 6750
Gly Phe Asn Pro Trp Ser 6755	Ser Val Pro Thr Thr 6760	Ser Thr Pro Gly 6765
Thr Ser Thr Val His Leu 6770	Ala Thr Ser Gly Thr 6775	Pro Ser Pro Leu 6780
Pro Gly His Thr Ala Pro 6785	Val Pro Leu Leu Ile 6790	Pro Phe Thr Leu 6795
Asn Phe Thr Ile Thr Asp 6800	Leu His Tyr Glu Glu 6805	Asn Met Gln His 6810
Pro Gly Ser Arg Lys Phe 6815	Asn Thr Thr Glu Arg 6820	Val Leu Gln Gly 6825
Leu Leu Lys Pro Leu Phe 6830	Lys Ser Thr Ser Val 6835	Gly Pro Leu Tyr 6840
Ser Gly Cys Arg Leu Thr 6845	Leu Leu Arg Pro Glu 6850	Lys His Gly Ala 6855
Ala Thr Gly Val Asp Ala 6860	Ile Cys Thr Leu Arg 6865	Leu Asp Pro Thr 6870
Gly Pro Gly Leu Asp Arg 6875	Glu Arg Leu Tyr Trp 6880	Glu Leu Ser Gln 6885
Leu Thr Asn Ser Ile Thr 6890	Glu Leu Gly Pro Tyr 6895	Thr Leu Asp Arg 6900
Asp Ser Leu Tyr Val Asn 6905	Gly Phe Asn Pro Trp 6910	Ser Ser Val Pro 6915
Thr Thr Ser Thr Pro Gly 6920	Thr Ser Thr Val His 6925	Leu Ala Thr Ser 6930
Gly Thr Pro Ser Ser Leu 6935	Pro Gly His Thr Thr 6940	Ala Gly Pro Leu 6945
Leu Val Pro Phe Thr Leu 6950	Asn Phe Thr Ile Thr 6955	Asn Leu Lys Tyr 6960

Glu	Glu	Asp	Met	His	Cys	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr
6965						6970					6975			
Glu	Arg	Val	Leu	Gln	Ser	Leu	His	Gly	Pro	Met	Phe	Lys	Asn	Thr
6980						6985					6990			
Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg
6995						7000					7005			
Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr
7010						7015					7020			
His	Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu
7025						7030					7035			
Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly
7040						7045					7050			
Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Xaa
7055						7060					7065			
Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Xaa
7070						7075					7080			
Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro	Xaa	Xaa	Xaa	Pro	Xaa	Xaa
7085						7090					7095			
Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe	Thr
7100						7105					7110			
Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly	Ser
7115						7120					7125			
Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Xaa
7130						7135					7140			
Pro	Xaa	Phe	Lys	Xaa	Thr	Ser	Val	Gly	Xaa	Leu	Tyr	Ser	Gly	Cys
7145						7150					7155			
Arg	Leu	Thr	Leu	Leu	Arg	Xaa	Glu	Lys	Xaa	Xaa	Ala	Ala	Thr	Xaa
7160						7165					7170			
Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro	Gly
7175						7180					7185			
Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Asn
7190						7195					7200			
Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp	Ser	Leu
7205						7210					7215			
Tyr	Val	Asn	Gly	Phe	Thr	His	Arg	Ser	Ser	Met	Pro	Thr	Thr	Ser
7220						7225					7230			
Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu	Glu	Thr	Ser	Gly	Thr	Pro
7235						7240					7245			
Ala	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Gly	Pro	Leu	Leu	Val	Pro
7250						7255					7260			



Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp
7265						7270					7275			
Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
7280						7285					7290			
Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly
7295						7300					7305			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys
7310						7315					7320			
Arg	Gly	Ala	Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Leu
7325						7330					7335			
Asp	Pro	Leu	Asn	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu
7340						7345					7350			
Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa
7355						7360					7365			
Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa
7370						7375					7380			
Xaa	Xaa	Xaa	Xaa	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu
7385						7390					7395			
Xaa	Thr	Ser	Gly	Thr	Pro	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa
7400						7405					7410			
Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn
7415						7420					7425			
Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe
7430						7435					7440			
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Xaa	Pro	Xaa	Phe
7445						7450					7455			
Lys	Xaa	Thr	Ser	Val	Gly	Xaa	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr
7460						7465					7470			
Leu	Leu	Arg	Xaa	Glu	Lys	Xaa	Xaa	Ala	Ala	Thr	Xaa	Val	Asp	Xaa
7475						7480					7485			
Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro	Gly	Leu	Asp	Arg
7490						7495					7500			
Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa
7505						7510					7515			
Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn
7520						7525					7530			
Gly	Phe	His	Pro	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly
7535						7540					7545			
Thr	Ser	Thr	Val	His	Leu	Ala	Thr	Ser	Gly	Thr	Pro	Ser	Ser	Leu

7550	7555	7560
Pro Gly His Thr Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu		
7565	7570	7575
Asn Phe Thr Ile Thr Asn Leu His Tyr Glu Glu Asn Met Gln His		
7580	7585	7590
Pro Gly Ser Arg Lys Phe Asn Thr Thr Glu Arg Val Leu Gln Gly		
7595	7600	7605
Leu Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr		
7610	7615	7620
Ser Gly Cys Arg Leu Thr Leu Leu Arg Pro Glu Lys Asn Gly Ala		
7625	7630	7635
Ala Thr Gly Met Asp Ala Ile Cys Ser His Arg Leu Asp Pro Lys		
7640	7645	7650
Ser Pro Gly Leu Asp Arg Glu Xaa Leu Tyr Trp Glu Leu Ser Xaa		
7655	7660	7665
Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly Pro Tyr Xaa Leu Asp Arg		
7670	7675	7680
Xaa Ser Leu Tyr Val Asn Gly Phe Xaa Xaa Xaa Xaa Xaa Xaa Xaa		
7685	7690	7695
Xaa Thr Ser Thr Pro Gly Thr Ser Xaa Val Xaa Leu Xaa Thr Ser		
7700	7705	7710
Gly Thr Pro Xaa Xaa Xaa Pro Xaa Xaa Thr Xaa Xaa Xaa Pro Leu		
7715	7720	7725
Leu Xaa Pro Phe Thr Leu Asn Phe Thr Ile Thr Asn Leu Xaa Tyr		
7730	7735	7740
Glu Glu Xaa Met Xaa Xaa Pro Gly Ser Arg Lys Phe Asn Thr Thr		
7745	7750	7755
Glu Arg Val Leu Gln Gly Leu Leu Xaa Pro Xaa Phe Lys Xaa Thr		
7760	7765	7770
Ser Val Gly Xaa Leu Tyr Ser Gly Cys Arg Leu Thr Leu Leu Arg		
7775	7780	7785
Xaa Glu Lys Xaa Xaa Ala Ala Thr Xaa Val Asp Xaa Xaa Cys Xaa		
7790	7795	7800
Xaa Xaa Xaa Asp Pro Xaa Xaa Pro Gly Leu Asp Arg Glu Xaa Leu		
7805	7810	7815
Tyr Trp Glu Leu Ser Xaa Leu Thr Xaa Xaa Ile Xaa Glu Leu Gly		
7820	7825	7830
Pro Tyr Xaa Leu Asp Arg Xaa Ser Leu Tyr Val Asn Gly Phe Thr		
7835	7840	7845

His	Gln	Asn	Ser	Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr
7850						7855					7860			
Val	Tyr	Trp	Ala	Thr	Thr	Gly	Thr	Pro	Ser	Ser	Phe	Pro	Gly	His
7865						7870					7875			
Thr	Glu	Pro	Gly	Pro	Leu	Leu	Ile	Pro	Phe	Thr	Phe	Asn	Phe	Thr
7880						7885					7890			
Ile	Thr	Asn	Leu	His	Tyr	Glu	Glu	Asn	Met	Gln	His	Pro	Gly	Ser
7895						7900					7905			
Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Thr
7910						7915					7920			
Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys
7925						7930					7935			
Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Gln	Glu	Ala	Ala	Thr	Gly
7940						7945					7950			
Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Val	Asp	Pro	Ile	Gly	Pro	Gly
7955						7960					7965			
Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa
7970						7975					7980			
Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu
7985						7990					7995			
Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Thr	Ser
8000						8005					8010			
Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser	Gly	Thr	Pro
8015						8020					8025			
Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu	Leu	Xaa	Pro
8030						8035					8040			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr	Glu	Glu	Xaa
8045						8050					8055			
Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val
8060						8065					8070			
Leu	Gln	Gly	Leu	Leu	Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr	Ser	Val	Gly
8075						8080					8085			
Xaa	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Xaa	Glu	Lys
8090						8095					8100			
Xaa	Xaa	Ala	Ala	Thr	Xaa	Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa
8105						8110					8115			
Asp	Pro	Xaa	Xaa	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu
8120						8125					8130			
Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa
8135						8140					8145			

Leu Asp 8150	Arg Xaa Ser Leu Tyr 8155	Val Asn Gly Phe Thr 8160	His Arg Ser
Ser Val 8165	Pro Thr Thr Ser Ser 8170	Pro Gly Thr Ser Thr 8175	Val His Leu
Ala Thr 8180	Ser Gly Thr Pro Ser 8185	Ser Leu Pro Gly His 8190	Thr Ala Pro
Val Pro 8195	Leu Leu Ile Pro Phe 8200	Thr Leu Asn Phe Thr 8205	Ile Thr Asn
Leu His 8210	Tyr Glu Glu Asn Met 8215	Gln His Pro Gly Ser 8220	Arg Lys Phe
Asn Thr 8225	Thr Glu Arg Val Leu 8230	Gln Gly Leu Leu Lys 8235	Pro Leu Phe
Lys Ser 8240	Thr Ser Val Gly Pro 8245	Leu Tyr Ser Gly Cys 8250	Arg Leu Thr
Leu Leu 8255	Arg Pro Glu Lys His 8260	Gly Ala Ala Thr Gly 8265	Val Asp Ala
Ile Cys 8270	Thr Leu Arg Leu Asp 8275	Pro Thr Gly Pro Gly 8280	Leu Asp Arg
Glu Xaa 8285	Leu Tyr Trp Glu Leu 8290	Ser Xaa Leu Thr Xaa 8295	Xaa Ile Xaa
Glu Leu 8300	Gly Pro Tyr Xaa Leu 8305	Asp Arg Xaa Ser Leu 8310	Tyr Val Asn
Gly Phe 8315	Xaa Xaa Xaa Xaa Xaa 8320	Xaa Xaa Xaa Thr Ser 8325	Thr Pro Gly
Thr Ser 8330	Xaa Val Xaa Leu Xaa 8335	Thr Ser Gly Thr Pro 8340	Xaa Xaa Xaa
Pro Xaa 8345	Xaa Thr Xaa Xaa Xaa 8350	Pro Leu Leu Xaa Pro 8355	Phe Thr Leu
Asn Phe 8360	Thr Ile Thr Asn Leu 8365	Xaa Tyr Glu Glu Xaa 8370	Met Xaa Xaa
Pro Gly 8375	Ser Arg Lys Phe Asn 8380	Thr Thr Glu Arg Val 8385	Leu Gln Gly
Leu Leu 8390	Xaa Pro Xaa Phe Lys 8395	Xaa Thr Ser Val Gly 8400	Xaa Leu Tyr
Ser Gly 8405	Cys Arg Leu Thr Leu 8410	Leu Arg Xaa Glu Lys 8415	Xaa Xaa Ala
Ala Thr 8420	Xaa Val Asp Xaa Xaa 8425	Cys Xaa Xaa Xaa Xaa 8430	Asp Pro Xaa
Xaa Pro	Gly Leu Asp Arg Glu	Xaa Leu Tyr Trp Glu	Leu Ser Xaa

8435		8440		8445
Leu Thr Xaa Xaa Ile Xaa Glu	Leu Gly Pro Tyr Xaa	Leu Asp Arg		
8450	8455	8460		
Xaa Ser Leu Tyr Val Asn Gly	Phe Thr His Arg Thr	Ser Val Pro		
8465	8470	8475		
Thr Thr Ser Thr Pro Gly Thr	Ser Thr Val His Leu	Ala Thr Ser		
8480	8485	8490		
Gly Thr Pro Ser Ser Leu Pro	Gly His Thr Ala Pro	Val Pro Leu		
8495	8500	8505		
Leu Ile Pro Phe Thr Leu Asn	Phe Thr Ile Thr Asn	Leu Gln Tyr		
8510	8515	8520		
Glu Glu Asp Met His Arg Pro	Gly Ser Arg Lys Phe	Asn Thr Thr		
8525	8530	8535		
Glu Arg Val Leu Gln Gly Leu	Leu Ser Pro Ile Phe	Lys Asn Ser		
8540	8545	8550		
Ser Val Gly Pro Leu Tyr Ser	Gly Cys Arg Leu Thr	Ser Leu Arg		
8555	8560	8565		
Pro Glu Lys Asp Gly Ala Ala	Thr Gly Met Asp Ala	Val Cys Leu		
8570	8575	8580		
Tyr His Pro Asn Pro Lys Arg	Pro Gly Leu Asp Arg	Glu Gln Leu		
8585	8590	8595		
Tyr Cys Glu Leu Ser Gln Leu	Thr His Asn Ile Thr	Glu Leu Gly		
8600	8605	8610		
Pro Tyr Ser Leu Asp Arg Asp	Ser Leu Tyr Val Asn	Gly Phe Thr		
8615	8620	8625		
His Gln Asn Ser Val Pro Thr	Thr Ser Thr Pro Gly	Thr Ser Thr		
8630	8635	8640		
Val Tyr Trp Ala Thr Thr Gly	Thr Pro Ser Ser Phe	Pro Gly His		
8645	8650	8655		
Thr Xaa Xaa Xaa Pro Leu Leu	Xaa Pro Phe Thr Leu	Asn Phe Thr		
8660	8665	8670		
Ile Thr Asn Leu Xaa Tyr Glu	Glu Xaa Met Xaa Xaa	Pro Gly Ser		
8675	8680	8685		
Arg Lys Phe Asn Thr Thr Glu	Arg Val Leu Gln Gly	Leu Leu Xaa		
8690	8695	8700		
Pro Xaa Phe Lys Xaa Thr Ser	Val Gly Xaa Leu Tyr	Ser Gly Cys		
8705	8710	8715		
Arg Leu Thr Leu Leu Arg Xaa	Glu Lys Xaa Xaa Ala	Ala Thr Xaa		
8720	8725	8730		

Val	Asp	Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro	Gly
	8735													
Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa
	8750					8755					8760			
Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu
	8765					8770					8775			
Tyr	Val	Asn	Gly	Phe	Thr	His	Trp	Ser	Ser	Gly	Leu	Thr	Thr	Ser
	8780					8785					8790			
Thr	Pro	Trp	Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro
	8795					8800					8805			
Ser	Pro	Val	Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro
	8810					8815					8820			
Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp
	8825					8830					8835			
Met	His	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Ala	Thr	Glu	Arg	Val
	8840					8845					8850			
Leu	Gln	Gly	Leu	Leu	Ser	Pro	Ile	Phe	Lys	Asn	Thr	Ser	Val	Gly
	8855					8860					8865			
Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys
	8870					8875					8880			
Gln	Glu	Ala	Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His	Arg	Val
	8885					8890					8895			
Asp	Pro	Ile	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu
	8900					8905					8910			
Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa
	8915					8920					8925			
Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa
	8930					8935					8940			
Xaa	Xaa	Xaa	Xaa	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu
	8945					8950					8955			
Xaa	Thr	Ser	Gly	Thr	Pro	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa
	8960					8965					8970			
Xaa	Pro	Leu	Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn
	8975					8980					8985			
Leu	Xaa	Tyr	Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe
	8990					8995					9000			
Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Xaa	Pro	Xaa	Phe
	9005					9010					9015			
Lys	Xaa	Thr	Ser	Val	Gly	Xaa	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr
	9020					9025					9030			

Leu	Leu	Arg	Xaa	Glu	Lys	Xaa	Xaa	Ala	Ala	Thr	Xaa	Val	Asp	Xaa
9035						9040					9045			
Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Asp	Pro	Xaa	Xaa	Pro	Gly	Leu	Asp	Arg
9050						9055					9060			
Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa	Leu	Thr	Xaa	Xaa	Ile	Xaa
9065						9070					9075			
Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg	Xaa	Ser	Leu	Tyr	Val	Asn
9080						9085					9090			
Gly	Phe	Thr	His	Arg	Ser	Phe	Gly	Leu	Thr	Thr	Ser	Thr	Pro	Trp
9095						9100					9105			
Thr	Ser	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Ser	Pro	Val
9110						9115					9120			
Pro	Ser	Pro	Thr	Thr	Ala	Gly	Pro	Leu	Leu	Val	Pro	Phe	Thr	Leu
9125						9130					9135			
Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu	Glu	Asp	Met	His	Arg
9140						9145					9150			
Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly
9155						9160					9165			
Leu	Leu	Thr	Pro	Leu	Phe	Arg	Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr
9170						9175					9180			
Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala
9185						9190					9195			
Ala	Thr	Arg	Val	Asp	Ala	Val	Cys	Thr	His	Arg	Pro	Asp	Pro	Lys
9200						9205					9210			
Ser	Pro	Gly	Leu	Asp	Arg	Glu	Xaa	Leu	Tyr	Trp	Glu	Leu	Ser	Xaa
9215						9220					9225			
Leu	Thr	Xaa	Xaa	Ile	Xaa	Glu	Leu	Gly	Pro	Tyr	Xaa	Leu	Asp	Arg
9230						9235					9240			
Xaa	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
9245						9250					9255			
Xaa	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Xaa	Val	Xaa	Leu	Xaa	Thr	Ser
9260						9265					9270			
Gly	Thr	Pro	Xaa	Xaa	Xaa	Pro	Xaa	Xaa	Thr	Xaa	Xaa	Xaa	Pro	Leu
9275						9280					9285			
Leu	Xaa	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Xaa	Tyr
9290						9295					9300			
Glu	Glu	Xaa	Met	Xaa	Xaa	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr
9305						9310					9315			
Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Xaa	Pro	Xaa	Phe	Lys	Xaa	Thr

9320		9325		9330
Ser Val Gly Xaa Leu Tyr	Ser Gly Cys Arg Leu Thr	Leu Leu Arg		
9335	9340	9345		
Xaa Glu Lys Xaa Xaa Ala	Ala Thr Xaa Val Asp	Xaa Xaa Cys Xaa		
9350	9355	9360		
Xaa Xaa Xaa Asp Pro Xaa	Xaa Pro Gly Leu Asp	Arg Glu Xaa Leu		
9365	9370	9375		
Tyr Trp Glu Leu Ser Xaa	Leu Thr Xaa Xaa Ile	Xaa Glu Leu Gly		
9380	9385	9390		
Pro Tyr Xaa Leu Asp Arg	Xaa Ser Leu Tyr Val	Asn Gly Phe Thr		
9395	9400	9405		
His Trp Ile Pro Val Pro	Thr Ser Ser Thr Pro	Gly Thr Ser Thr		
9410	9415	9420		
Val Asp Leu Gly Ser Gly	Thr Pro Ser Ser Leu	Pro Ser Pro Thr		
9425	9430	9435		
Thr Ala Gly Pro Leu Leu	Val Pro Phe Thr Leu	Asn Phe Thr Ile		
9440	9445	9450		
Thr Asn Leu Gln Tyr Gly	Glu Asp Met Gly His	Pro Gly Ser Arg		
9455	9460	9465		
Lys Phe Asn Thr Thr Glu	Arg Val Leu Gln Gly	Leu Leu Gly Pro		
9470	9475	9480		
Ile Phe Lys Asn Thr Ser	Val Gly Pro Leu Tyr	Ser Gly Cys Arg		
9485	9490	9495		
Leu Thr Ser Leu Arg Ser	Glu Lys Asp Gly Ala	Ala Thr Gly Val		
9500	9505	9510		
Asp Ala Ile Cys Ile His	His Leu Asp Pro Lys	Ser Pro Gly Leu		
9515	9520	9525		
Asp Arg Glu Xaa Leu Tyr	Trp Glu Leu Ser Xaa	Leu Thr Xaa Xaa		
9530	9535	9540		
Ile Xaa Glu Leu Gly Pro	Tyr Xaa Leu Asp Arg	Xaa Ser Leu Tyr		
9545	9550	9555		
Val Asn Gly Phe Xaa Xaa	Xaa Xaa Xaa Xaa	Xaa Thr Ser Thr		
9560	9565	9570		
Pro Gly Thr Ser Xaa Val	Xaa Leu Xaa Thr Ser	Gly Thr Pro Xaa		
9575	9580	9585		
Xaa Xaa Pro Xaa Xaa Thr	Xaa Xaa Xaa Pro Leu	Leu Xaa Pro Phe		
9590	9595	9600		
Thr Leu Asn Phe Thr Ile	Thr Asn Leu Xaa Tyr	Glu Glu Xaa Met		
9605	9610	9615		



Xaa Xaa	Pro Gly Ser Arg	Lys	Phe Asn Thr Thr	Glu	Arg Val Leu
9620		9625		9630	
Gln Gly	Leu Leu Xaa Pro	Xaa	Phe Lys Xaa Thr	Ser	Val Gly Xaa
9635		9640		9645	
Leu Tyr	Ser Gly Cys Arg	Leu	Thr Leu Leu Arg	Xaa	Glu Lys Xaa
9650		9655		9660	
Xaa Ala	Ala Thr Xaa Val	Asp	Xaa Xaa Cys Xaa	Xaa	Xaa Xaa Asp
9665		9670		9675	
Pro Xaa	Xaa Pro Gly Leu	Asp	Arg Glu Xaa Leu	Tyr	Trp Glu Leu
9680		9685		9690	
Ser Xaa	Leu Thr Xaa Xaa	Ile	Xaa Glu Leu Gly	Pro	Tyr Xaa Leu
9695		9700		9705	
Asp Arg	Xaa Ser Leu Tyr	Val	Asn Gly Phe Thr	His	Gln Thr Phe
9710		9715		9720	
Ala Pro	Asn Thr Ser Thr	Pro	Gly Thr Ser Thr	Val	Asp Leu Gly
9725		9730		9735	
Thr Ser	Gly Thr Pro Ser	Ser	Leu Pro Ser Pro	Thr	Ser Ala Gly
9740		9745		9750	
Pro Leu	Leu Val Pro Phe	Thr	Leu Asn Phe Thr	Ile	Thr Asn Leu
9755		9760		9765	
Gln Tyr	Glu Glu Asp Met	His	His Pro Gly Ser	Arg	Lys Phe Asn
9770		9775		9780	
Thr Thr	Glu Arg Val Leu	Gln	Gly Leu Leu Gly	Pro	Met Phe Lys
9785		9790		9795	
Asn Thr	Ser Val Gly Leu	Leu	Tyr Ser Gly Cys	Arg	Leu Thr Leu
9800		9805		9810	
Leu Arg	Pro Glu Lys Asn	Gly	Ala Ala Thr Arg	Val	Asp Ala Val
9815		9820		9825	
Cys Thr	His Arg Pro Asp	Pro	Lys Ser Pro Gly	Leu	Asp Arg Glu
9830		9835		9840	
Xaa Leu	Tyr Trp Glu Leu	Ser	Xaa Leu Thr Xaa	Xaa	Ile Xaa Glu
9845		9850		9855	
Leu Gly	Pro Tyr Xaa Leu	Asp	Arg Xaa Ser Leu	Tyr	Val Asn Gly
9860		9865		9870	
Phe Xaa	Xaa Xaa Xaa Xaa	Xaa	Xaa Xaa Thr Ser	Thr	Pro Gly Thr
9875		9880		9885	
Ser Xaa	Val Xaa Leu Xaa	Thr	Ser Gly Thr Pro	Xaa	Xaa Xaa Pro
9890		9895		9900	
Xaa Xaa	Thr Ala Pro Val	Pro	Leu Leu Ile Pro	Phe	Thr Leu Asn
9905		9910		9915	

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Phe	Thr	Ile	Thr	Asn	Leu	His	Tyr	Glu	Asn	Met	Gln	His	Pro	
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Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu
9935						9940					9945			
Leu	Arg	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser
9950						9955					9960			
Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Glu	Lys	His	Gly	Ala	Ala
9965						9970					9975			
Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	Leu	Arg	Leu	Asp	Pro	Thr	Gly
9980						9985					9990			
Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu
9995						10000					10005			
Thr	Asn	Ser	Val	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Leu	Asp	Arg	Asp
10010						10015					10020			
Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	Gln	Arg	Ser	Ser	Val	Pro	Thr
10025						10030					10035			
Thr	Ser	Ile	Pro	Gly	Thr	Ser	Ala	Val	His	Leu	Glu	Thr	Ser	Gly
10040						10045					10050			
Thr	Pro	Ala	Ser	Leu	Pro	Gly	His	Thr	Ala	Pro	Gly	Pro	Leu	Leu
10055						10060					10065			
Val	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu	Gln	Tyr	Glu
10070						10075					10080			
Val	Asp	Met	Arg	His	Pro	Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu
10085						10090					10095			
Arg	Val	Leu	Gln	Gly	Leu	Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser
10100						10105					10110			
Val	Gly	Pro	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro
10115						10120					10125			
Glu	Lys	Arg	Gly	Ala	Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His
10130						10135					10140			
Arg	Leu	Asp	Pro	Leu	Asn	Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr
10145						10150					10155			
Trp	Glu	Leu	Ser	Lys	Leu	Thr	Arg	Gly	Ile	Ile	Glu	Leu	Gly	Pro
10160						10165					10170			
Tyr	Leu	Leu	Asp	Arg	Gly	Ser	Leu	Tyr	Val	Asn	Gly	Phe	Thr	His
10175						10180					10185			
Arg	Asn	Phe	Val	Pro	Ile	Thr	Ser	Thr	Pro	Gly	Thr	Ser	Thr	Val
10190						10195					10200			
His	Leu	Gly	Thr	Ser	Glu	Thr	Pro	Ser	Ser	Leu	Pro	Arg	Pro	Ile

10205	10210	10215
Val Pro Gly Pro Leu Leu	Val Pro Phe Thr Leu	Asn Phe Thr Ile
10220	10225	10230
Thr Asn Leu Gln Tyr Glu	Glu Ala Met Arg His	Pro Gly Ser Arg
10235	10240	10245
Lys Phe Asn Thr Thr Glu	Arg Val Leu Gln Gly	Leu Leu Arg Pro
10250	10255	10260
Leu Phe Lys Asn Thr Ser	Ile Gly Pro Leu Tyr	Ser Ser Cys Arg
10265	10270	10275
Leu Thr Leu Leu Arg Pro	Glu Lys Asp Lys Ala	Ala Thr Arg Val
10280	10285	10290
Asp Ala Ile Cys Thr His	His Pro Asp Pro Gln	Ser Pro Gly Leu
10295	10300	10305
Asn Arg Glu Gln Leu Tyr	Trp Glu Leu Ser Gln	Leu Thr His Gly
10310	10315	10320
Ile Thr Glu Leu Gly Pro	Tyr Thr Leu Asp Arg	Asp Ser Leu Tyr
10325	10330	10335
Val Asp Gly Phe Thr His	Trp Ser Pro Ile Pro	Thr Thr Ser Thr
10340	10345	10350
Pro Gly Thr Ser Ile Val	Asn Leu Gly Thr Ser	Gly Ile Pro Pro
10355	10360	10365
Ser Leu Pro Glu Thr Thr	Xaa Xaa Xaa Pro Leu	Leu Xaa Pro Phe
10370	10375	10380
Thr Leu Asn Phe Thr Ile	Thr Asn Leu Xaa Tyr	Glu Glu Xaa Met
10385	10390	10395
Xaa Xaa Pro Gly Ser Arg	Lys Phe Asn Thr Thr	Glu Arg Val Leu
10400	10405	10410
Gln Gly Leu Leu Lys Pro	Leu Phe Lys Ser Thr	Ser Val Gly Pro
10415	10420	10425
Leu Tyr Ser Gly Cys Arg	Leu Thr Leu Leu Arg	Pro Glu Lys Asp
10430	10435	10440
Gly Val Ala Thr Arg Val	Asp Ala Ile Cys Thr	His Arg Pro Asp
10445	10450	10455
Pro Lys Ile Pro Gly Leu	Asp Arg Gln Gln Leu	Tyr Trp Glu Leu
10460	10465	10470
Ser Gln Leu Thr His Ser	Ile Thr Glu Leu Gly	Pro Tyr Thr Leu
10475	10480	10485
Asp Arg Asp Ser Leu Tyr	Val Asn Gly Phe Thr	Gln Arg Ser Ser
10490	10495	10500

Val	Pro	Thr	Thr	Ser	Thr	Pro	Gly	Thr	Phe	Thr	Val	Gln	Pro	Glu
10505						10510					10515			
Thr	Ser	Glu	Thr	Pro	Ser	Ser	Leu	Pro	Gly	Pro	Thr	Ala	Thr	Gly
10520						10525					10530			
Pro	Val	Leu	Leu	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr	Asn	Leu
10535						10540					10545			
Gln	Tyr	Glu	Glu	Asp	Met	His	Arg	Pro	Gly	Ser	Arg	Lys	Phe	Asn
10550						10555					10560			
Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu	Leu	Met	Pro	Leu	Phe	Lys
10565						10570					10575			
Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr	Ser	Gly	Cys	Arg	Leu	Thr	Leu
10580						10585					10590			
Leu	Arg	Pro	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Arg	Val	Asp	Ala	Val
10595						10600					10605			
Cys	Thr	His	Arg	Pro	Asp	Pro	Lys	Ser	Pro	Gly	Leu	Asp	Arg	Glu
10610						10615					10620			
Arg	Leu	Tyr	Trp	Lys	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Thr	Glu
10625						10630					10635			
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10640						10645					10650			
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10655						10660					10665			
Ser	Thr	Met	His	Leu	Ala	Thr	Ser	Arg	Thr	Pro	Ala	Ser	Leu	Ser
10670						10675					10680			
Gly	Pro	Thr	Thr	Ala	Ser	Pro	Leu	Leu	Val	Leu	Phe	Thr	Ile	Asn
10685						10690					10695			
Phe	Thr	Ile	Thr	Asn	Leu	Arg	Tyr	Glu	Glu	Asn	Met	His	His	Pro
10700						10705					10710			
Gly	Ser	Arg	Lys	Phe	Asn	Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu
10715						10720					10725			
Leu	Arg	Pro	Val	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser
10730						10735					10740			
Gly	Cys	Arg	Leu	Thr	Leu	Leu	Arg	Pro	Lys	Lys	Asp	Gly	Ala	Ala
10745						10750					10755			
Thr	Lys	Val	Asp	Ala	Ile	Cys	Thr	Tyr	Arg	Pro	Asp	Pro	Lys	Ser
10760						10765					10770			
Pro	Gly	Leu	Asp	Arg	Glu	Gln	Leu	Tyr	Trp	Glu	Leu	Ser	Gln	Leu
10775						10780					10785			
Thr	His	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr	Gln	Asp	Arg	Asp
10790						10795					10800			

Ser Leu 10805	Tyr Asn Val Gly Phe 10810	Thr Gln Arg Ser Ser 10815	Val Pro Thr
Thr Ser 10820	Val Pro Gly Thr Pro 10825	Thr Val Asp Leu Gly 10830	Thr Ser Gly
Thr Pro 10835	Val Ser Lys Pro Gly 10840	Pro Ser Ala Ala Ser 10845	Pro Leu Leu
Val Leu 10850	Phe Thr Leu Asn Gly 10855	Thr Ile Thr Asn Leu 10860	Arg Tyr Glu
Glu Asn 10865	Met Gln His Pro Gly 10870	Ser Arg Lys Phe Asn 10875	Thr Thr Glu
Arg Val 10880	Leu Gln Gly Leu Leu 10885	Arg Ser Leu Phe Lys 10890	Ser Thr Ser
Val Gly 10895	Pro Leu Tyr Ser Gly 10900	Cys Arg Leu Thr Leu 10905	Leu Arg Pro
Glu Lys 10910	Asp Gly Thr Ala Thr 10915	Gly Val Asp Ala Ile 10920	Cys Thr His
His Pro 10925	Asp Pro Lys Ser Pro 10930	Arg Leu Asp Arg Glu 10935	Gln Leu Tyr
Trp Glu 10940	Leu Ser Gln Leu Thr 10945	His Asn Ile Thr Glu 10950	Leu Gly His
Tyr Ala 10955	Leu Asp Asn Asp Ser 10960	Leu Phe Val Asn Gly 10965	Phe Thr His
Arg Ser 10970	Ser Val Ser Thr Thr 10975	Ser Thr Pro Gly Thr 10980	Pro Thr Val
Tyr Leu 10985	Gly Ala Ser Lys Thr 10990	Pro Ala Ser Ile Phe 10995	Gly Pro Ser
Ala Ala 11000	Ser His Leu Leu Ile 11005	Leu Phe Thr Leu Asn 11010	Phe Thr Ile
Thr Asn 11015	Leu Arg Tyr Glu Glu 11020	Asn Met Trp Pro Gly 11025	Ser Arg Lys
Phe Asn 11030	Thr Thr Glu Arg Val 11035	Leu Gln Gly Leu Leu 11040	Arg Pro Leu
Phe Lys 11045	Asn Thr Ser Val Gly 11050	Pro Leu Tyr Ser Gly 11055	Ser Arg Leu
Thr Leu 11060	Leu Arg Pro Glu Lys 11065	Asp Gly Glu Ala Thr 11070	Gly Val Asp
Ala Ile 11075	Cys Thr His Arg Pro 11080	Asp Pro Thr Gly Pro 11085	Gly Leu Asp
Arg Glu	Gln Leu Tyr Leu Glu	Leu Ser Gln Leu Thr	His Ser Ile

11090	11095	11100
Thr Glu Leu Gly Pro Tyr	Thr Leu Asp Arg Asp	Ser Leu Tyr Val
11105	11110	11115
Asn Gly Phe Thr His Arg	Ser Ser Val Pro Thr	Thr Ser Thr Gly
11120	11125	11130
Val Val Ser Glu Glu Pro	Phe Thr Leu Asn Phe	Thr Ile Asn Asn
11135	11140	11145
Leu Arg Tyr Met Ala Asp	Met Gly Gln Pro Gly	Ser Leu Lys Phe
11150	11155	11160
Asn Ile Thr Asp Asn Val	Met Lys His Leu Leu	Ser Pro Leu Phe
11165	11170	11175
Gln Arg Ser Ser Leu Gly	Ala Arg Tyr Thr Gly	Cys Arg Val Ile
11180	11185	11190
Ala Leu Arg Ser Val Lys	Asn Gly Ala Glu Thr	Arg Val Asp Leu
11195	11200	11205
Leu Cys Thr Tyr Leu Gln	Pro Leu Ser Gly Pro	Gly Leu Pro Ile
11210	11215	11220
Lys Gln Val Phe His Glu	Leu Ser Gln Gln Thr	His Gly Ile Thr
11225	11230	11235
Arg Leu Gly Pro Tyr Ser	Leu Asp Lys Asp Ser	Leu Tyr Leu Asn
11240	11245	11250
Gly Tyr Asn Glu Pro Gly	Leu Asp Glu Pro Pro	Thr Thr Pro Lys
11255	11260	11265
Pro Ala Thr Thr Phe Leu	Pro Pro Leu Ser Glu	Ala Thr Thr Ala
11270	11275	11280
Met Gly Tyr His Leu Lys	Thr Leu Thr Leu Asn	Phe Thr Ile Ser
11285	11290	11295
Asn Leu Gln Tyr Ser Pro	Asp Met Gly Lys Gly	Ser Ala Thr Phe
11300	11305	11310
Asn Ser Thr Glu Gly Val	Leu Gln His Leu Leu	Arg Pro Leu Phe
11315	11320	11325
Gln Lys Ser Ser Met Gly	Pro Phe Tyr Leu Gly	Cys Gln Leu Ile
11330	11335	11340
Ser Leu Arg Pro Glu Lys	Asp Gly Ala Ala Thr	Gly Val Asp Thr
11345	11350	11355
Thr Cys Thr Tyr His Pro	Asp Pro Val Gly Pro	Gly Leu Asp Ile
11360	11365	11370
Gln Gln Leu Tyr Trp Glu	Leu Ser Gln Leu Thr	His Gly Val Thr
11375	11380	11385

Gln Leu	Gly Phe Tyr Val	Leu	Asp Arg Asp Ser	Leu	Phe Ile Asn
11390		11395		11400	
Gly Tyr	Ala Pro Gln Asn	Leu	Ser Ile Arg Gly	Glu	Tyr Gln Ile
11405		11410		11415	
Asn Phe	His Ile Val Asn	Trp	Asn Leu Ser Asn	Pro	Asp Pro Thr
11420		11425		11430	
Ser Ser	Glu Tyr Ile Thr	Leu	Leu Arg Asp Ile	Gln	Asp Lys Val
11435		11440		11445	
Thr Thr	Leu Tyr Lys Gly	Ser	Gln Leu His Asp	Thr	Phe Arg Phe
11450		11455		11460	
Cys Leu	Val Thr Asn Leu	Thr	Met Asp Ser Val	Leu	Val Thr Val
11465		11470		11475	
Lys Ala	Leu Phe Ser Ser	Asn	Leu Asp Pro Ser	Leu	Val Glu Gln
11480		11485		11490	
Val Phe	Leu Asp Lys Thr	Leu	Asn Ala Ser Phe	His	Trp Leu Gly
11495		11500		11505	
Ser Thr	Tyr Gln Leu Val	Asp	Ile His Val Thr	Glu	Met Glu Ser
11510		11515		11520	
Ser Val	Tyr Gln Pro Thr	Ser	Ser Ser Ser Thr	Gln	His Phe Tyr
11525		11530		11535	
Leu Asn	Phe Thr Ile Thr	Asn	Leu Pro Tyr Ser	Gln	Asp Lys Ala
11540		11545		11550	
Gln Pro	Gly Thr Thr Asn	Tyr	Gln Arg Asn Lys	Arg	Asn Ile Glu
11555		11560		11565	
Asp Ala	Leu Asn Gln Leu	Phe	Arg Asn Ser Ser	Ile	Lys Ser Tyr
11570		11575		11580	
Phe Ser	Asp Cys Gln Val	Ser	Thr Phe Arg Ser	Val	Pro Asn Arg
11585		11590		11595	
His His	Thr Gly Val Asp	Ser	Leu Cys Asn Phe	Ser	Pro Leu Ala
11600		11605		11610	
Arg Arg	Val Asp Arg Val	Ala	Ile Tyr Glu Glu	Phe	Leu Arg Met
11615		11620		11625	
Thr Arg	Asn Gly Thr Gln	Leu	Gln Asn Phe Thr	Leu	Asp Arg Ser
11630		11635		11640	
Ser Val	Leu Val Asp Gly	Tyr	Ser Pro Asn Arg	Asn	Glu Pro Leu
11645		11650		11655	
Thr Gly	Asn Ser Asp Leu	Pro	Phe Trp Ala Val	Ile	Leu Ile Gly
11660		11665		11670	
Leu Ala	Gly Leu Leu Gly	Leu	Ile Thr Cys Leu	Ile	Cys Gly Val
11675		11680		11685	

Leu Val Thr Thr Arg Arg Arg Lys Lys Glu Gly Glu Tyr Asn Val  
11690 11695 11700

Gln Gln Gln Cys Pro Gly Tyr Tyr Gln Ser His Leu Asp Leu Glu  
11705 11710 11715

Asp Leu Gln  
11720

<210> 163

<211> 156

<212> PRT

<213> Homo sapiens

<400> 163

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Ala Thr Glu Arg Val Leu Gln Gly Leu Leu Ser Pro Ile Phe Lys  
35 40 45

Asn Ser Ser Val Gly Pro Leu Tyr Ser Gly Cys Arg Leu Thr Ser Leu  
50 55 60

Arg Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu  
65 70 75 80

Tyr His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr  
85 90 95

Trp Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr  
100 105 110

Ser Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly Phe Thr His Gln Asn  
115 120 125

Ser Val Pro Thr Thr Ser Thr Pro Gly Thr Ser Thr Val Tyr Trp Ala  
130 135 140

Thr Thr Gly Thr Pro Ser Phe Pro Gly His Thr  
145 150 155

<210> 164

<211> 42

<212> PRT



<213> Homo sapiens

<400> 164

Ala Thr Val Pro Phe Met Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Ala Thr Glu Arg Glu Leu Gln Gly Leu  
35 40

<210> 165

<211> 42

<212> PRT

<213> Homo sapiens

<400> 165

Thr Ala Val Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 166

<211> 42

<212> PRT

<213> Homo sapiens

<400> 166

Val Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Ala Met Arg His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 167

<211> 42

<212> PRT

<213> Homo sapiens

<400> 167

Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe  
20 25 30

Ser Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 168

<211> 42

<212> PRT

<213> Homo sapiens

<400> 168

Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 169

<211> 42

<212> PRT

<213> Homo sapiens

<400> 169

Ala Pro Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Val Asp Met Arg His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu

35 40  
 <210> 170  
 <211> 42  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 170  
 Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
 1 5 10 15  
 Asn Leu Gln Tyr Glu Glu Asp Met Arg His Pro Gly Ser Arg Lys Phe  
 20 25 30  
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
 35 40  
 <210> 171  
 <211> 42  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 171  
 Ala Ala Gly Pro Leu Leu Met Pro Phe Thr Leu Asn Phe Thr Ile Thr  
 1 5 10 15  
 Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe  
 20 25 30  
 Asn Thr Met Glu Ser Val Leu Gln Gly Leu  
 35 40  
 <210> 172  
 <211> 42  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 172  
 Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Cys Thr Ile Thr  
 1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met Arg Arg Thr Gly Ser Arg Lys Phe  
                   20                  25                  30

Asn Thr Met Glu Ser Val Leu Gln Gly Leu  
           35                  40

<210> 173

<211> 42

<212> PRT

<213> Homo sapiens

<400> 173

Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
   1                  5                  10                  15

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe  
                   20                  25                  30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
           35                  40

<210> 174

<211> 42

<212> PRT

<213> Homo sapiens

<400> 174

Thr Ala Gly Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr  
   1                  5                  10                  15

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe  
                   20                  25                  30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
           35                  40

<210> 175

<211> 42

<212> PRT

<213> Homo sapiens

<400> 175

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Gly Glu Asp Met Gly His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 176

<211> 42

<212> PRT

<213> Homo sapiens

<400> 176

Thr Ala Gly Pro Leu Leu Val Leu Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Lys Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Thr Leu  
35 40

<210> 177

<211> 42

<212> PRT

<213> Homo sapiens

<400> 177

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Ala Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 178

<211> 42

<212> PRT

176 177 178

<213> Homo sapiens

<400> 178

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Arg Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 179

<211> 42

<212> PRT

<213> Homo sapiens

<400> 179

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 180

<211> 42

<212> PRT

<213> Homo sapiens

<400> 180

Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 181

<211> 42

<212> PRT

<213> Homo sapiens

<400> 181

Ala Thr Gly Pro Val Leu Leu Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His Arg Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 182

<211> 42

<212> PRT

<213> Homo sapiens

<400> 182

Ala Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 183

<211> 42

<212> PRT

<213> Homo sapiens

<400> 183

Ser Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Gln Tyr Glu Glu Asp Met His His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu

35 40  
 <210> 184  
 <211> 42  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 184  
 Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr  
 1 5 10 15  
 Asn Gln Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe  
 20 25 30  
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
 35 40  
 <210> 185  
 <211> 42  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 185  
 Thr Ala Ser Pro Leu Leu Val Leu Phe Thr Ile Asn Phe Thr Ile Thr  
 1 5 10 15  
 Asn Leu Arg Tyr Glu Glu Asn Met His His Pro Gly Ser Arg Lys Phe  
 20 25 30  
 Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
 35 40  
 <210> 186  
 <211> 42  
 <212> PRT  
 <213> Homo sapiens  
  
 <400> 186  
 Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr  
 1 5 10 15



Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe  
                   20                  25                  30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
           35                  40

<210> 187

<211> 42

<212> PRT

<213> Homo sapiens

<400> 187

Glu Pro Gly Pro Leu Leu Ile Pro Phe Thr Phe Asn Phe Thr Ile Thr  
   1                  5                  10                  15

Asn Leu Arg Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe  
                   20                  25                  30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
           35                  40

<210> 188

<211> 42

<212> PRT

<213> Homo sapiens

<400> 188

Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr  
   1                  5                  10                  15

Asn Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe  
                   20                  25                  30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
           35                  40

<210> 189

<211> 42

<212> PRT

<213> Homo sapiens

<400> 189

Ala Pro Val Pro Leu Leu Ile Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asp Leu His Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 190

<211> 42

<212> PRT

<213> Homo sapiens

<400> 190

Ala Ala Ser Pro Leu Leu Val Leu Phe Thr Leu Asn Gly Thr Ile Thr  
1 5 10 15

Asn Leu Arg Tyr Glu Glu Asn Met Gln His Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Gly Leu  
35 40

<210> 191

<211> 42

<212> PRT

<213> Homo sapiens

<400> 191

Thr Ala Gly Pro Leu Leu Val Pro Phe Thr Leu Asn Phe Thr Ile Thr  
1 5 10 15

Asn Leu Lys Tyr Glu Glu Asp Met His Cys Pro Gly Ser Arg Lys Phe  
20 25 30

Asn Thr Thr Glu Arg Val Leu Gln Ser Leu  
35 40

<210> 192

<211> 41

<212> PRT

190 191 192

<213> Homo sapiens

<400> 192

Ala	Ala	Ser	His	Leu	Leu	Ile	Leu	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Thr
1				5					10					15	
Asn	Leu	Arg	Tyr	Glu	Glu	Asn	Met	Trp	Pro	Gly	Ser	Arg	Lys	Phe	Asn
			20					25					30		
Thr	Thr	Glu	Arg	Val	Leu	Gln	Gly	Leu							
		35					40								

<210> 193

<211> 42

<212> PRT

<213> Homo sapiens

<400> 193

Thr	Gly	Val	Val	Ser	Glu	Glu	Pro	Phe	Thr	Leu	Asn	Phe	Thr	Ile	Asn
1				5					10					15	
Asn	Leu	Arg	Tyr	Met	Ala	Asp	Met	Gly	Gln	Pro	Gly	Ser	Leu	Lys	Phe
			20					25					30		
Asn	Ile	Thr	Asp	Asn	Val	Met	Lys	His	Leu						
		35					40								

<210> 194

<211> 42

<212> PRT

<213> Homo sapiens

<400> 194

Ala	Met	Gly	Tyr	His	Leu	Lys	Thr	Leu	Thr	Leu	Asn	Phe	Thr	Ile	Ser
1				5					10					15	
Asn	Leu	Gln	Tyr	Ser	Pro	Asp	Met	Gly	Lys	Gly	Ser	Ala	Thr	Phe	Asn
			20					25					30		
Ser	Thr	Glu	Gly	Val	Leu	Gln	His	Leu	Leu						
		35					40								

<210> 195

<212> PRT

<213> Homo sapiens

<400> 195

Leu Lys Pro Leu Phe Arg Asn Ser Ser Leu Glu Tyr Leu Tyr Ser Gly  
1 5 10 15

Cys Arg Leu Ala Ser Leu Arg  
20

<210> 196

<211> 23

<212> PRT

<213> Homo sapiens

<400> 196

Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Ser Ser Leu Tyr Ser Gly  
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg  
20

<210> 197

<211> 23

<212> PRT

<213> Homo sapiens

<400> 197

Leu Lys Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly  
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg  
20

<210> 198

<211> 23

<212> PRT

<213> Homo sapiens

<400> 198

Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly
1				5					10					15	

Cys	Arg	Leu	Thr	Leu	Leu	Arg
			20			

<210> 199

<211> 23

<212> PRT

<213> Homo sapiens

<400> 199

Leu	Lys	Pro	Leu	Phe	Lys	Ser	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Ser
1				5					10					15	

Cys	Arg	Leu	Thr	Leu	Leu	Arg
			20			

<210> 200

<211> 23

<212> PRT

<213> Homo sapiens

<400> 200

Leu	Lys	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly
1				5					10					15	

Cys	Arg	Leu	Thr	Ser	Leu	Arg
			20			

<210> 201

<211> 23

<212> PRT

<213> Homo sapiens

<400> 201

Leu Gly Pro Ile Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly  
1 5 10 15

Cys Arg Leu Thr Ser Leu Arg  
20

<210> 202

<211> 23

<212> PRT

<213> Homo sapiens

<400> 202

Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly  
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg  
20

<210> 203

<211> 23

<212> PRT

<213> Homo sapiens

<400> 203

Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly  
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg  
20

<210> 204

<211> 23

<212> PRT

<213> Homo sapiens

<400> 204

Leu Gly Pro Met Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly  
1 5 10 15

Cys Arg Leu Thr Ser Leu Arg

202 203 204

20

&lt;210&gt; 205

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 205

Leu	Gly	Pro	Leu	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly
1				5					10					15	

Cys	Arg	Leu	Ile	Ser	Leu	Arg
			20			

&lt;210&gt; 206

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 206

Leu	Gly	Pro	Leu	Phe	Lys	Asn	Ser	Ser	Val	Asp	Pro	Leu	Tyr	Ser	Gly
1				5					10					15	

Cys	Arg	Leu	Thr	Ser	Leu	Arg
			20			

&lt;210&gt; 207

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 207

Leu	Ser	Pro	Ile	Phe	Lys	Asn	Ser	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly
1				5					10					15	

Cys	Arg	Leu	Thr	Ser	Leu	Arg
			20			

&lt;210&gt; 208

<211> 23

<212> PRT

<213> Homo sapiens

<400> 208

Leu	Ser	Pro	Ile	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly
1				5					10					15	

Cys	Arg	Leu	Thr	Leu	Leu	Arg
				20		

<210> 209

<211> 23

<212> PRT

<213> Homo sapiens

<400> 209

Leu	Ser	Pro	Leu	Phe	Gln	Arg	Ser	Ser	Leu	Gly	Ala	Arg	Tyr	Thr	Gly
1				5					10					15	

Cys	Arg	Val	Ile	Ala	Leu	Arg
				20		

<210> 210

<211> 23

<212> PRT

<213> Homo sapiens

<400> 210

Leu	Arg	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr	Ser	Gly
1				5					10					15	

Cys	Arg	Leu	Thr	Leu	Leu	Arg
				20		

<210> 211

<211> 23

<212> PRT



**000000**      **000000**      **000000**

Leu Arg Pro Leu Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly  
1 5 10 15

<210> 212

<211> 23

<212> PRT

<400> 212

Leu Arg Pro Leu Phe Lys Asn Thr Ser Ile Gly Pro Leu Tyr Ser Ser  
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg  
20

<210> 213

<211> 23

<212> PRT

<213> Homo sapiens

<400> 213

Leu Arg Pro Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly  
1 5 10 15

Cys Arg Leu Thr Leu Leu Arg  
20

<210> 214

<211> 23

<212> PRT

<213> Homo sapiens

<400> 214

Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Leu Leu Tyr Ser Gly  
 1 5 10 15

Cys Arg Leu Thr Leu Leu Arg  
 20

<210> 215

<211> 23

<212> PRT

<213> Homo sapiens

<400> 215

Leu Arg Pro Val Phe Lys Asn Thr Ser Val Gly Pro Leu Tyr Ser Gly  
 1 5 10 15

Cys Arg Leu Thr Leu Leu Arg  
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<210> 216

<211> 23

<212> PRT

<213> Homo sapiens

<400> 216

Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly  
 1 5 10 15

Cys Arg Leu Thr Leu Leu Arg  
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<210> 217

<211> 23

<212> PRT

<213> Homo sapiens

<400> 217

Leu Arg Ser Leu Phe Lys Ser Thr Ser Val Gly Pro Leu Tyr Ser Gly  
 1 5 10 15

Cys Arg Leu Thr Ser Leu Arg

20

&lt;210&gt; 218

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 218

Leu	Thr	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Gly	Pro	Leu	Tyr	Ser	Gly
1				5					10					15	

Cys	Arg	Leu	Thr	Leu	Leu	Arg
			20			

&lt;210&gt; 219

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 219

Leu	Thr	Pro	Leu	Phe	Arg	Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr	Ser	Gly
1				5					10					15	

Cys	Arg	Leu	Thr	Leu	Leu	Arg
			20			

&lt;210&gt; 220

&lt;211&gt; 23

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 220

Leu	Met	Pro	Leu	Phe	Lys	Asn	Thr	Ser	Val	Ser	Ser	Leu	Tyr	Ser	Gly
1				5					10					15	

Cys	Arg	Leu	Thr	Leu	Leu	Arg
			20			

&lt;210&gt; 221

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<211> 22

<212> PRT

<213> Homo sapiens

<400> 221

Arg Pro Leu Phe Gln Lys Ser Ser Met Gly Pro Phe Tyr Leu Gly Cys  
1 5 10 15

Gln Leu Ile Ser Leu Arg  
20

<210> 222

<211> 58

<212> PRT

<213> Homo sapiens

<400> 222

Pro Glu Lys Asp Ser Ser Ala Met Ala Val Asp Ala Ile Cys Thr His  
1 5 10 15

Arg Pro Asp Pro Glu Asp Leu Gly Leu Asp Arg Glu Arg Leu Tyr Trp  
20 25 30

Glu Leu Ser Asn Leu Thr Asn Gly Ile Gln Glu Leu Gly Pro Tyr Thr  
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
50 55

<210> 223

<211> 58

<212> PRT

<213> Homo sapiens

<400> 223

Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His  
1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp  
20 25 30

Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr

35                      40                      45  
 Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
     50                      55  
  
 <210> 224  
  
 <211> 58  
  
 <212> PRT  
  
 <213> Homo sapiens  
  
  
 <400> 224  
  
 Pro Lys Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His  
 1                      5                      10                      15  
 Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp  
                     20                      25                      30  
 Glu Leu Ser Lys Leu Thr Asn Asp Ile Glu Glu Leu Gly Pro Tyr Thr  
                     35                      40                      45  
 Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
     50                      55  
  
 <210> 225  
  
 <211> 58  
  
 <212> PRT  
  
 <213> Homo sapiens  
  
  
 <400> 225  
  
 Pro Glu Lys Asp Gly Thr Ala Thr Gly Val Asp Ala Ile Cys Thr His  
 1                      5                      10                      15  
 His Pro Asp Pro Lys Ser Pro Arg Leu Asp Arg Glu Gln Leu Tyr Trp  
                     20                      25                      30  
 Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly His Tyr Ala  
                     35                      40                      45  
 Leu Asp Asn Asp Ser Leu Phe Val Asn Gly  
     50                      55  
  
 <210> 226  
  
 <211> 58  
  
 <212> PRT

<213> Homo sapiens

<400> 226

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Pro Glu Lys Asp Gly Glu Ala Thr Gly Val Asp Ala Ile Cys Thr His
1           5           10           15
Arg Pro Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Gln Leu Tyr Leu
          20           25           30
Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr
          35           40           45
Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
          50           55

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<210> 227

<211> 58

<212> PRT

<213> Homo sapiens

<400> 227

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Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr
1           5           10           15
His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp
          20           25           30
Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser
          35           40           45
Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly
          50           55

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<210> 228

<211> 58

<212> PRT

<213> Homo sapiens

<400> 228

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Pro Glu Lys Asp Gly Ala Ala Thr Gly Met Asp Ala Val Cys Leu Tyr
1           5           10           15
His Pro Asn Pro Lys Arg Pro Gly Leu Asp Arg Glu Gln Leu Tyr Cys
          20           25           30

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Glu Leu Ser Gln Leu Thr His Asn Ile Thr Glu Leu Gly Pro Tyr Ser  
                   35                  40                  45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly  
       50                  55

<210> 229

<211> 58

<212> PRT

<213> Homo sapiens

<400> 229

Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Ala Cys Thr Tyr  
   1                  5                  10                  15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp  
                   20                  25                  30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr  
                   35                  40                  45

Leu Asp Arg Val Ser Leu Tyr Val Asn Gly  
       50                  55

<210> 230

<211> 58

<212> PRT

<213> Homo sapiens

<400> 230

Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr  
   1                  5                  10                  15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp  
                   20                  25                  30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr  
                   35                  40                  45

Gln Asp Arg Asp Ser Leu Tyr Val Asn Gly  
       50                  55

<210> 231

<211> 58

<212> PRT

<213> Homo sapiens

<400> 231

Pro Lys Lys Asp Gly Ala Ala Thr Lys Val Asp Ala Ile Cys Thr Tyr  
1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp  
20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr  
35 40 45

Gln Asp Arg Asp Ser Leu Tyr Asn Val Gly  
50 55

<210> 232

<211> 58

<212> PRT

<213> Homo sapiens

<400> 232

Pro Glu Lys Asp Gly Ala Ala Thr Arg Val Asp Ala Val Cys Thr His  
1 5 10 15

Arg Pro Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp  
20 25 30

Lys Leu Ser Gln Leu Thr His Gly Ile Thr Glu Leu Gly Pro Tyr Thr  
35 40 45

Leu Asp Arg His Ser Leu Tyr Val Asn Gly  
50 55

<210> 233

<211> 58

<212> PRT

<213> Homo sapiens

<400> 233

Pro Glu Lys Asp Gly Val Ala Thr Arg Val Asp Ala Ile Cys Thr His  
1 5 10 15

231  
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Arg Pro Asp Pro Lys Ile Pro Gly Leu Asp Arg Gln Gln Leu Tyr Trp  
20 25 30

Glu Leu Ser Gln Leu Thr His Ser Ile Thr Glu Leu Gly Pro Tyr Thr  
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly  
50 55

<210> 234

<211> 58

<212> PRT

<213> Homo sapiens

<400> 234

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Ile His  
1 5 10 15

His Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Arg Leu Tyr Trp  
20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr  
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
50 55

<210> 235

<211> 58

<212> PRT

<213> Homo sapiens

<400> 235

Ser Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr His  
1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp  
20 25 30

Glu Leu Ser Gln Leu Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr  
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
50 55

<210> 236

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 236

Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His
1				5					10					15	

Arg	Leu	Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp
			20					25					30		

Glu	Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr
		35					40					45			

Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly
50						55			

&lt;210&gt; 237

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 237

Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His
1				5					10					15	

Arg	Val	Asp	Pro	Lys	Ser	Pro	Gly	Val	Asp	Arg	Glu	Gln	Leu	Tyr	Trp
			20					25					30		

Glu	Leu	Ser	Gln	Leu	Thr	Asn	Gly	Ile	Lys	Glu	Leu	Gly	Pro	Tyr	Thr
		35					40					45			

Leu	Asp	Arg	Asn	Ser	Leu	Tyr	Val	Asn	Gly
50						55			

&lt;210&gt; 238

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 238

Ser	Glu	Lys	Asp	Gly	Ala	Ala	Thr	Gly	Val	Asp	Ala	Ile	Cys	Thr	His
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1                    5                    10                    15  
 His Leu Asn Pro Gln Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp  
                   20                    25                    30  
 Gln Leu Ser Gln Met Thr Asn Gly Ile Lys Glu Leu Gly Pro Tyr Thr  
                   35                    40                    45  
 Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
                   50                    55

<210> 239

<211> 58

<212> PRT

<213> Homo sapiens

<400> 239

Pro Glu Lys Arg Gly Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His  
 1                    5                    10                    15  
 Arg Leu Asp Pro Leu Asn Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp  
                   20                    25                    30  
 Glu Leu Ser Lys Leu Thr Arg Gly Ile Ile Glu Leu Gly Pro Tyr Leu  
                   35                    40                    45  
 Leu Asp Arg Gly Ser Leu Tyr Val Asn Gly  
                   50                    55

<210> 240

<211> 58

<212> PRT

<213> Homo sapiens

<400> 240

Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His  
 1                    5                    10                    15  
 Arg Leu Asp Pro Lys Ser Pro Gly Leu Asn Arg Glu Gln Leu Tyr Trp  
                   20                    25                    30  
 Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr  
                   35                    40                    45  
 Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
                   50                    55

&lt;210&gt; 241

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 241

Pro Glu Lys Asn Gly Ala Ala Thr Gly Met Asp Ala Ile Cys Ser His  
1 5 10 15

Arg Leu Asp Pro Lys Ser Pro Gly Leu Asp Arg Glu Gln Leu Tyr Trp  
20 25 30

Glu Leu Ser Gln Leu Thr His Gly Ile Lys Glu Leu Gly Pro Tyr Thr  
35 40 45

Leu Asp Arg Asn Ser Leu Tyr Val Asn Gly  
50 55

&lt;210&gt; 242

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 242

Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu  
1 5 10 15

Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp  
20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Val Thr Glu Leu Gly Pro Tyr Thr  
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly  
50 55

&lt;210&gt; 243

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 243

Pro Glu Lys His Gly Ala Ala Thr Gly Val Asp Ala Ile Cys Thr Leu  
1 5 10 15

Arg Leu Asp Pro Thr Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp  
20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr  
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly  
50 55

<210> 244

<211> 58

<212> PRT

<213> Homo sapiens

<400> 244

Pro Glu Lys His Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His  
1 5 10 15

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp  
20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr  
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly  
50 55

<210> 245

<211> 58

<212> PRT

<213> Homo sapiens

<400> 245

Pro Glu Lys Gln Glu Ala Ala Thr Gly Val Asp Thr Ile Cys Thr His  
1 5 10 15

Arg Val Asp Pro Ile Gly Pro Gly Leu Asp Arg Glu Arg Leu Tyr Trp  
20 25 30

Glu Leu Ser Gln Leu Thr Asn Ser Ile Thr Glu Leu Gly Pro Tyr Thr  
35 40 45

Leu Asp Arg Asp Ser Leu Tyr Val Asn Gly

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&lt;210&gt; 246

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 246

Pro	Glu	Lys	Gln	Glu	Ala	Ala	Thr	Gly	Val	Asp	Thr	Ile	Cys	Thr	His
1				5					10					15	

Arg	Val	Asp	Pro	Ile	Gly	Pro	Gly	Leu	Asp	Arg	Glu	Arg	Leu	Tyr	Trp
			20					25					30		

Glu	Leu	Ser	Gln	Leu	Thr	Asn	Ser	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr
		35					40					45			

Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asp	Gly
	50					55			

&lt;210&gt; 247

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 247

Pro	Glu	Lys	Asp	Lys	Ala	Ala	Thr	Arg	Val	Asp	Ala	Ile	Cys	Thr	His
1				5					10					15	

His	Pro	Asp	Pro	Gln	Ser	Pro	Gly	Leu	Asn	Arg	Glu	Gln	Leu	Tyr	Trp
			20					25					30		

Glu	Leu	Ser	Gln	Leu	Thr	His	Gly	Ile	Thr	Glu	Leu	Gly	Pro	Tyr	Thr
		35					40					45			

Leu	Asp	Arg	Asp	Ser	Leu	Tyr	Val	Asp	Gly
	50					55			

&lt;210&gt; 248

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 248

Ser Val Lys Asn Gly Ala Glu Thr Arg Val Asp Leu Leu Cys Thr Tyr  
 1 5 10 15

Leu Gln Pro Leu Ser Gly Pro Gly Leu Pro Ile Lys Gln Val Phe His  
 20 25 30

Glu Leu Ser Gln Gln Thr His Gly Ile Thr Arg Leu Gly Pro Tyr Ser  
 35 40 45

Leu Asp Lys Asp Ser Leu Tyr Leu Asn Gly  
 50 55

&lt;210&gt; 249

&lt;211&gt; 58

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 249

Pro Glu Lys Asp Gly Ala Ala Thr Gly Val Asp Thr Thr Cys Thr Tyr  
 1 5 10 15

His Pro Asp Pro Val Gly Pro Gly Leu Asp Ile Gln Gln Leu Tyr Trp  
 20 25 30

Glu Leu Ser Gln Leu Thr His Gly Val Thr Gln Leu Gly Phe Tyr Val  
 35 40 45

Leu Asp Arg Asp Ser Leu Phe Ile Asn Gly  
 50 55

&lt;210&gt; 250

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 250

Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr  
 1 5 10

&lt;210&gt; 251

&lt;211&gt; 12

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<212> PRT

<213> Homo sapiens

<400> 251

Phe	Thr	His	Arg	Ser	Ser	Met	Pro	Thr	Thr	Ser	Ile
1				5					10		

<210> 252

<211> 12

<212> PRT

<213> Homo sapiens

<400> 252

Phe	Thr	His	Arg	Thr	Ser	Val	Pro	Thr	Ser	Ser	Thr
1				5					10		

<210> 253

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<212> PRT

<213> Homo sapiens

<400> 253

Phe	Thr	His	Arg	Thr	Ser	Val	Pro	Thr	Thr	Ser	Thr
1				5					10		

<210> 254

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<212> PRT

<213> Homo sapiens

<400> 254

Phe	Thr	His	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Ser
1				5					10		

<210> 255



<211> 12

<212> PRT

<213> Homo sapiens

<400> 255

Phe	Thr	His	Arg	Ser	Ser	Val	Ser	Thr	Thr	Ser	Thr
1				5					10		

<210> 256

<211> 12

<212> PRT

<213> Homo sapiens

<400> 256

Phe	Thr	His	Arg	Ser	Ser	Val	Ala	Pro	Thr	Ser	Thr
1				5					10		

<210> 257

<211> 12

<212> PRT

<213> Homo sapiens

<400> 257

Phe	Thr	His	Arg	Ser	Ser	Gly	Leu	Thr	Thr	Ser	Thr
1				5					10		

<210> 258

<211> 12

<212> PRT

<213> Homo sapiens

<400> 258

Phe	Thr	His	Arg	Ser	Phe	Gly	Leu	Thr	Thr	Ser	Thr
1				5					10		

255 256 257 258

<210> 259

<211> 12

<212> PRT

<213> Homo sapiens

<400> 259

Phe Thr His Arg Ser Ser Phe Leu Thr Thr Ser Thr  
1 5 10

<210> 260

<211> 12

<212> PRT

<213> Homo sapiens

<400> 260

Phe Thr His Arg Asn Phe Val Pro Ile Thr Ser Thr  
1 5 10

<210> 261

<211> 12

<212> PRT

<213> Homo sapiens

<400> 261

Phe Thr His Arg Ser Ser Val Pro Thr Thr Ser Ile  
1 5 10

<210> 262

<211> 12

<212> PRT

<213> Homo sapiens

<400> 262

Phe Thr His Gln Ser Ser Val Ser Thr Thr Ser Thr  
1 5 10

<210> 263

<211> 12

<212> PRT

<213> Homo sapiens

<400> 263

Phe	Thr	His	Gln	Thr	Ser	Ala	Pro	Asn	Thr	Ser	Thr
1				5					10		

<210> 264

<211> 12

<212> PRT

<213> Homo sapiens

<400> 264

Phe	Thr	His	Gln	Thr	Phe	Ala	Pro	Asn	Thr	Ser	Thr
1				5					10		

<210> 265

<211> 12

<212> PRT

<213> Homo sapiens

<400> 265

Phe	Thr	His	Gln	Asn	Ser	Val	Pro	Thr	Thr	Ser	Thr
1				5					10		

<210> 266

<211> 12

<212> PRT

<213> Homo sapiens

<400> 266

Phe Thr His Gln Ser Ser Met Thr Thr Thr Arg Thr

1                      5                      10

<210> 267

<211> 12

<212> PRT

<213> Homo sapiens

<400> 267

Phe Thr His Trp Ile Pro Val Pro Thr Ser Ser Thr  
1                      5                      10

<210> 268

<211> 12

<212> PRT

<213> Homo sapiens

<400> 268

Phe Thr His Trp Ser Pro Ile Pro Thr Thr Ser Thr  
1                      5                      10

<210> 269

<211> 12

<212> PRT

<213> Homo sapiens

<400> 269

Phe Thr His Trp Ser Ser Gly Leu Thr Thr Ser Thr  
1                      5                      10

<210> 270

<211> 12

<212> PRT

<213> Homo sapiens

<400> 270

Phe	His	Pro	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Thr
1				5					10		

&lt;210&gt; 271

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 271

Phe	Asn	Pro	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Thr
1				5					10		

&lt;210&gt; 272

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 272

Phe	Asn	Pro	Trp	Ser	Ser	Val	Pro	Thr	Thr	Ser	Thr
1				5					10		

&lt;210&gt; 273

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 273

Phe	Thr	Gln	Arg	Ser	Ser	Val	Pro	Thr	Thr	Ser	Ile
1				5					10		

&lt;210&gt; 274

&lt;211&gt; 12

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 274

Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Thr  
1 5 10

<210> 275

<211> 12

<212> PRT

<213> Homo sapiens

<400> 275

Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Val  
1 5 10

<210> 276

<211> 12

<212> PRT

<213> Homo sapiens

<400> 276

Tyr Asn Glu Pro Gly Leu Asp Glu Pro Pro Thr Thr  
1 5 10

<210> 277

<211> 12

<212> PRT

<213> Homo sapiens

<400> 277

Tyr Ala Pro Gln Asn Leu Ser Ile Arg Gly Glu Tyr  
1 5 10

<210> 278

<211> 21

<212> PRT

<213> Homo sapiens

Phe Thr Gln Arg Ser Ser Val Pro Thr Thr Ser Thr

<400> 278

Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser Ser  
1 5 10 15

Ser Pro Ser Pro Thr  
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<210> 279

<211> 23

<212> PRT

<213> Homo sapiens

<400> 279

Pro Gly Thr Ser Thr Val Asp Leu Arg Thr Ser Gly Thr Pro Ser Ser  
1 5 10 15

Leu Ser Ser Pro Thr Ile Met  
20

<210> 280

<211> 21

<212> PRT

<213> Homo sapiens

<400> 280

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Phe Ser  
1 5 10 15

Leu Pro Ser Pro Ala  
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<210> 281

<211> 20

<212> PRT

<213> Homo sapiens

<400> 281

Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Ser Leu  
1 5 10 15

Pro Ser Pro Thr  
20

<210> 282

<211> 20

<212> PRT

<213> Homo sapiens

<400> 282

Pro Gly Thr Ser Thr Val Asp Leu Gly Ser Gly Thr Pro Ser Leu Pro  
1 5 10 15

Ser Ser Pro Thr  
20

<210> 283

<211> 21

<212> PRT

<213> Homo sapiens

<400> 283

Pro Gly Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Ser  
1 5 10 15

Leu Pro Ser Pro Thr  
20

<210> 284

<211> 21

<212> PRT

<213> Homo sapiens

<400> 284

Pro Gly Thr Pro Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Val Ser  
1 5 10 15

Lys Pro Gly Pro Ser  
20

<210> 285



<211> 21

<212> PRT

<213> Homo sapiens

<400> 285

Pro Trp Thr Ser Thr Val Asp Leu Gly Thr Ser Gly Thr Pro Ser Pro  
1 5 10 15

Val Pro Ser Pro Thr  
20

<210> 286

<211> 21

<212> PRT

<213> Homo sapiens

<400> 286

Pro Gly Thr Ser Thr Val Tyr Trp Ala Thr Thr Gly Thr Pro Ser Ser  
1 5 10 15

Phe Pro Gly His Thr  
20

<210> 287

<211> 21

<212> PRT

<213> Homo sapiens

<400> 287

Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Ser  
1 5 10 15

Leu Pro Gly His Thr  
20

<210> 288

<211> 21

<212> PRT

20250325 14:59:59

<213> Homo sapiens

<400> 288

Pro Gly Thr Ser Thr Val His Leu Ala Thr Ser Gly Thr Pro Ser Pro  
1 5 10 15

Leu Pro Gly His Thr  
20

<210> 289

<211> 21

<212> PRT

<213> Homo sapiens

<400> 289

Pro Asp Thr Ser Thr Met His Leu Ala Thr Ser Arg Thr Pro Ala Ser  
1 5 10 15

Leu Ser Gly Pro Thr  
20

<210> 290

<211> 21

<212> PRT

<213> Homo sapiens

<400> 290

Pro Gly Thr Ser Ala Val His Leu Glu Thr Ser Gly Thr Pro Ala Ser  
1 5 10 15

Leu Pro Gly His Thr  
20

<210> 291

<211> 21

<212> PRT

<213> Homo sapiens

<400> 291

288 289 290 291

Pro Gly Thr Ser Ala Val His Leu Glu Thr Thr Gly Thr Pro Ser Ser  
1 5 10 15

Phe Pro Gly His Thr  
20

<210> 292

<211> 21

<212> PRT

<213> Homo sapiens

<400> 292

Pro Gly Thr Ser Thr Val His Leu Gly Thr Ser Glu Thr Pro Ser Ser  
1 5 10 15

Leu Pro Arg Pro Ile  
20

<210> 293

<211> 21

<212> PRT

<213> Homo sapiens

<400> 293

Pro Gly Thr Ser Ile Val Asn Leu Gly Thr Ser Gly Ile Pro Pro Ser  
1 5 10 15

Leu Pro Glu Thr Thr  
20

<210> 294

<211> 21

<212> PRT

<213> Homo sapiens

<400> 294

Pro Gly Thr Phe Thr Val Gln Pro Glu Thr Ser Glu Thr Pro Ser Ser  
1 5 10 15

Leu Pro Gly Pro Thr

20

&lt;210&gt; 295

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 295

Pro	Gly	Thr	Pro	Thr	Val	Asp	Leu	Gly	Thr	Ser	Gly	Thr	Pro	Val	Ser
1				5					10					15	

Lys	Pro	Gly	Pro	Ser
			20	

&lt;210&gt; 296

&lt;211&gt; 21

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 296

Pro	Gly	Thr	Pro	Thr	Val	Tyr	Leu	Gly	Ala	Ser	Lys	Thr	Pro	Ala	Ser
1				5					10					15	

Ile	Phe	Gly	Pro	Ser
			20	

&lt;210&gt; 297

&lt;211&gt; 16

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 297

Pro	Lys	Pro	Ala	Thr	Thr	Phe	Leu	Pro	Pro	Leu	Ser	Glu	Ala	Thr	Thr
1				5					10					15	

&lt;210&gt; 298

&lt;211&gt; 21

&lt;212&gt; PRT

<213> Homo sapiens

<400> 298

Gln Ile Asn Phe His Ile Val Asn Trp Asn Leu Ser Asn Pro Asp Pro  
 1 5 10 15  
 Thr Ser Ser Glu Tyr  
 20

<210> 299

<211> 1794

<212> PRT

<213> Homo sapiens

<400> 299

Met Glu His Ile Thr Lys Ile Pro Asn Glu Ala Ala His Arg Gly Thr  
 1 5 10 15  
 Ile Arg Pro Val Lys Gly Pro Gln Thr Ser Thr Ser Pro Ala Ser Pro  
 20 25 30  
 Lys Gly Leu His Thr Gly Gly Thr Lys Arg Met Glu Thr Thr Thr  
 35 40 45  
 Ala Leu Lys Thr Thr Thr Thr Ala Leu Lys Thr Thr Ser Arg Ala Thr  
 50 55 60  
 Leu Thr Thr Ser Val Tyr Thr Pro Thr Leu Gly Thr Leu Thr Pro Leu  
 65 70 75 80  
 Asn Ala Ser Arg Gln Met Ala Ser Thr Ile Leu Thr Glu Met Met Ile  
 85 90 95  
 Thr Thr Pro Tyr Val Phe Pro Asp Val Pro Glu Thr Thr Ser Ser Leu  
 100 105 110  
 Ala Thr Ser Leu Gly Ala Glu Thr Ser Thr Ala Leu Pro Arg Thr Thr  
 115 120 125  
 Pro Ser Val Leu Asn Arg Glu Ser Glu Thr Thr Ala Ser Leu Val Ser  
 130 135 140  
 Arg Ser Gly Ala Glu Arg Ser Pro Val Ile Gln Thr Leu Asp Val Ser  
 145 150 155 160  
 Ser Ser Glu Pro Asp Thr Thr Ala Ser Trp Val Ile His Pro Ala Glu  
 165 170 175  
 Thr Ile Pro Thr Val Ser Lys Thr Thr Pro Asn Phe Phe His Ser Glu  
 180 185 190

Leu Asp Thr Val Ser Ser Thr Ala Thr Ser His Gly Ala Asp Val Ser  
 195 200 205  
 Ser Ala Ile Pro Thr Asn Ile Ser Pro Ser Glu Leu Asp Ala Leu Thr  
 210 215 220  
 Pro Leu Val Thr Ile Ser Gly Thr Asp Thr Ser Thr Thr Phe Pro Thr  
 225 230 235 240  
 Leu Thr Lys Ser Pro His Glu Thr Glu Thr Arg Thr Thr Trp Leu Thr  
 245 250 255  
 His Pro Ala Glu Thr Ser Ser Thr Ile Pro Arg Thr Ile Pro Asn Phe  
 260 265 270  
 Ser His His Glu Ser Asp Ala Thr Pro Ser Ile Ala Thr Ser Pro Gly  
 275 280 285  
 Ala Glu Thr Ser Ser Ala Ile Pro Ile Met Thr Val Ser Pro Gly Ala  
 290 295 300  
 Glu Asp Leu Val Thr Ser Gln Val Thr Ser Ser Gly Thr Asp Arg Asn  
 305 310 315 320  
 Met Thr Ile Pro Thr Leu Thr Leu Ser Pro Gly Glu Pro Lys Thr Ile  
 325 330 335  
 Ala Ser Leu Val Thr His Pro Glu Ala Gln Thr Ser Ser Ala Ile Pro  
 340 345 350  
 Thr Ser Thr Ile Ser Pro Ala Val Ser Arg Leu Val Thr Ser Met Val  
 355 360 365  
 Thr Ser Leu Ala Ala Lys Thr Ser Thr Thr Asn Arg Ala Leu Thr Asn  
 370 375 380  
 Ser Pro Gly Glu Pro Ala Thr Thr Val Ser Leu Val Thr His Pro Ala  
 385 390 395 400  
 Gln Thr Ser Pro Thr Val Pro Trp Thr Thr Ser Ile Phe Phe His Ser  
 405 410 415  
 Lys Ser Asp Thr Thr Pro Ser Met Thr Thr Ser His Gly Ala Glu Ser  
 420 425 430  
 Ser Ser Ala Val Pro Thr Pro Thr Val Ser Thr Glu Val Pro Gly Val  
 435 440 445  
 Val Thr Pro Leu Val Thr Ser Ser Arg Ala Val Ile Ser Thr Thr Ile  
 450 455 460  
 Pro Ile Leu Thr Leu Ser Pro Gly Glu Pro Glu Thr Thr Pro Ser Met  
 465 470 475 480  
 Ala Thr Ser His Gly Glu Glu Ala Ser Ser Ala Ile Pro Thr Pro Thr  
 485 490 495  
 Val Ser Pro Gly Val Pro Gly Val Val Thr Ser Leu Val Thr Ser Ser

500					505					510					
Arg	Ala	Val	Thr	Ser	Thr	Thr	Ile	Pro	Ile	Leu	Thr	Phe	Ser	Leu	Gly
		515					520					525			
Glu	Pro	Glu	Thr	Thr	Pro	Ser	Met	Ala	Thr	Ser	His	Gly	Thr	Glu	Ala
	530					535					540				
Gly	Ser	Ala	Val	Pro	Thr	Val	Leu	Pro	Glu	Val	Pro	Gly	Met	Val	Thr
545					550					555					560
Ser	Leu	Val	Ala	Ser	Ser	Arg	Ala	Val	Thr	Ser	Thr	Thr	Leu	Pro	Thr
				565					570					575	
Leu	Thr	Leu	Ser	Pro	Gly	Glu	Pro	Glu	Thr	Thr	Pro	Ser	Met	Ala	Thr
			580					585					590		
Ser	His	Gly	Ala	Glu	Ala	Ser	Ser	Thr	Val	Pro	Thr	Val	Ser	Pro	Glu
		595					600					605			
Val	Pro	Gly	Val	Val	Thr	Ser	Leu	Val	Thr	Ser	Ser	Ser	Gly	Val	Asn
	610					615					620				
Ser	Thr	Ser	Ile	Pro	Thr	Leu	Ile	Leu	Ser	Pro	Gly	Glu	Leu	Glu	Thr
625					630					635					640
Thr	Pro	Ser	Met	Ala	Thr	Ser	His	Gly	Ala	Glu	Ala	Ser	Ser	Ala	Val
				645					650					655	
Pro	Thr	Pro	Thr	Val	Ser	Pro	Gly	Val	Ser	Gly	Val	Val	Thr	Pro	Leu
			660					665					670		
Val	Thr	Ser	Ser	Arg	Ala	Val	Thr	Ser	Thr	Thr	Ile	Pro	Ile	Leu	Thr
		675					680					685			
Leu	Ser	Ser	Ser	Glu	Pro	Glu	Thr	Thr	Pro	Ser	Met	Ala	Thr	Ser	His
	690					695					700				
Gly	Val	Glu	Ala	Ser	Ser	Ala	Val	Leu	Thr	Val	Ser	Pro	Glu	Val	Pro
705					710					715					720
Gly	Met	Val	Thr	Ser	Leu	Val	Thr	Ser	Ser	Arg	Ala	Val	Thr	Ser	Thr
				725					730					735	
Thr	Ile	Pro	Thr	Leu	Thr	Ile	Ser	Ser	Asp	Glu	Pro	Glu	Thr	Thr	Thr
		740					745						750		
Ser	Leu	Val	Thr	His	Ser	Glu	Ala	Lys	Met	Ile	Ser	Ala	Ile	Pro	Thr
		755					760					765			
Leu	Ala	Val	Ser	Pro	Thr	Val	Gln	Gly	Leu	Val	Thr	Ser	Leu	Val	Thr
	770					775					780				
Ser	Ser	Gly	Ser	Glu	Thr	Ser	Ala	Phe	Ser	Asn	Leu	Thr	Val	Ala	Ser
785					790					795					800
Ser	Gln	Pro	Glu	Thr	Ile	Asp	Ser	Trp	Val	Ala	His	Pro	Gly	Thr	Glu
				805					810					815	

Ala Ser Ser Val Val Pro Thr Leu Thr Val Ser Thr Gly Glu Pro Phe  
                   820                                  825                                  830  
 Thr Asn Ile Ser Leu Val Thr His Pro Ala Glu Ser Ser Ser Thr Leu  
                   835                                  840                                  845  
 Pro Arg Thr Thr Ser Arg Phe Ser His Ser Glu Leu Asp Thr Met Pro  
                   850                                  855                                  860  
 Ser Thr Val Thr Ser Pro Glu Ala Glu Ser Ser Ser Ala Ile Ser Thr  
                   865                                  870                                  875                                  880  
 Thr Ile Ser Pro Gly Ile Pro Gly Val Leu Thr Ser Leu Val Thr Ser  
                                   885                                  890                                  895  
 Ser Gly Arg Asp Ile Ser Ala Thr Phe Pro Thr Val Pro Glu Ser Pro  
                                   900                                  905                                  910  
 His Glu Ser Glu Ala Thr Ala Ser Trp Val Thr His Pro Ala Val Thr  
                                   915                                  920                                  925  
 Ser Thr Thr Val Pro Arg Thr Thr Pro Asn Tyr Ser His Ser Glu Pro  
                                   930                                  935                                  940  
 Asp Thr Thr Pro Ser Ile Ala Thr Ser Pro Gly Ala Glu Ala Thr Ser  
                                   945                                  950                                  955                                  960  
 Asp Phe Pro Thr Ile Thr Val Ser Pro Asp Val Pro Asp Met Val Thr  
                                   965                                  970                                  975  
 Ser Gln Val Thr Ser Ser Gly Thr Asp Thr Ser Ile Thr Ile Pro Thr  
                                   980                                  985                                  990  
 Leu Thr Leu Ser Ser Gly Glu Pro Glu Thr Thr Thr Ser Phe Ile Thr  
                                   995                                  1000                                  1005  
 Tyr Ser Glu Thr His Thr Ser Ser Ala Ile Pro Thr Leu Pro Val  
                                   1010                                  1015                                  1020  
 Ser Pro Gly Ala Ser Lys Met Leu Thr Ser Leu Val Ile Ser Ser  
                                   1025                                  1030                                  1035  
 Gly Thr Asp Ser Thr Thr Thr Phe Pro Thr Leu Thr Glu Thr Pro  
                                   1040                                  1045                                  1050  
 Tyr Glu Pro Glu Thr Thr Ala Ile Gln Leu Ile His Pro Ala Glu  
                                   1055                                  1060                                  1065  
 Thr Asn Thr Met Val Pro Arg Thr Thr Pro Lys Phe Ser His Ser  
                                   1070                                  1075                                  1080  
 Lys Ser Asp Thr Thr Leu Pro Val Ala Ile Thr Ser Pro Gly Pro  
                                   1085                                  1090                                  1095  
 Glu Ala Ser Ser Ala Val Ser Thr Thr Thr Ile Ser Pro Asp Met  
                                   1100                                  1105                                  1110  
 Ser Asp Leu Val Thr Ser Leu Val Pro Ser Ser Gly Thr Asp Thr  
                                   1115                                  1120                                  1125



Ser Thr Thr Phe Pro Thr Leu Ser Glu Thr Pro Tyr Glu Pro Glu  
 1130 1135 1140  
 Thr Thr Ala Thr Trp Leu Thr His Pro Ala Glu Thr Ser Thr Thr  
 1145 1150 1155  
 Val Ser Gly Thr Ile Pro Asn Phe Ser His Arg Gly Ser Asp Thr  
 1160 1165 1170  
 Ala Pro Ser Met Val Thr Ser Pro Gly Val Asp Thr Arg Ser Gly  
 1175 1180 1185  
 Val Pro Thr Thr Thr Ile Pro Pro Ser Ile Pro Gly Val Val Thr  
 1190 1195 1200  
 Ser Gln Val Thr Ser Ser Ala Thr Asp Thr Ser Thr Ala Ile Pro  
 1205 1210 1215  
 Thr Leu Thr Pro Ser Pro Gly Glu Pro Glu Thr Thr Ala Ser Ser  
 1220 1225 1230  
 Ala Thr His Pro Gly Thr Gln Thr Gly Phe Thr Val Pro Ile Arg  
 1235 1240 1245  
 Thr Val Pro Ser Ser Glu Pro Asp Thr Met Ala Ser Trp Val Thr  
 1250 1255 1260  
 His Pro Pro Gln Thr Ser Thr Pro Val Ser Arg Thr Thr Ser Ser  
 1265 1270 1275  
 Phe Ser His Ser Ser Pro Asp Ala Thr Pro Val Met Ala Thr Ser  
 1280 1285 1290  
 Pro Arg Thr Glu Ala Ser Ser Ala Val Leu Thr Thr Ile Ser Pro  
 1295 1300 1305  
 Gly Ala Pro Glu Met Val Thr Ser Gln Ile Thr Ser Ser Gly Ala  
 1310 1315 1320  
 Ala Thr Ser Thr Thr Val Pro Thr Leu Thr His Ser Pro Gly Met  
 1325 1330 1335  
 Pro Glu Thr Thr Ala Leu Leu Ser Thr His Pro Arg Thr Glu Thr  
 1340 1345 1350  
 Ser Lys Thr Phe Pro Ala Ser Thr Val Phe Pro Gln Val Ser Glu  
 1355 1360 1365  
 Thr Thr Ala Ser Leu Thr Ile Arg Pro Gly Ala Glu Thr Ser Thr  
 1370 1375 1380  
 Ala Leu Pro Thr Gln Thr Thr Ser Ser Leu Phe Thr Leu Leu Val  
 1385 1390 1395  
 Thr Gly Thr Ser Arg Val Asp Leu Ser Pro Thr Ala Ser Pro Gly  
 1400 1405 1410  
 Val Ser Ala Lys Thr Ala Pro Leu Ser Thr His Pro Gly Thr Glu

1415	1420	1425
Thr Ser Thr Met Ile Pro	Thr Ser Thr Leu Ser	Leu Gly Leu Leu
1430	1435	1440
Glu Thr Thr Gly Leu Leu	Ala Thr Ser Ser Ser	Ala Glu Thr Ser
1445	1450	1455
Thr Ser Thr Leu Thr Leu	Thr Val Ser Pro Ala	Val Ser Gly Leu
1460	1465	1470
Ser Ser Ala Ser Ile Thr	Thr Asp Lys Pro Gln	Thr Val Thr Ser
1475	1480	1485
Trp Asn Thr Glu Thr Ser	Pro Ser Val Thr Ser	Val Gly Pro Pro
1490	1495	1500
Glu Phe Ser Arg Thr Val	Thr Gly Thr Thr Met	Thr Leu Ile Pro
1505	1510	1515
Ser Glu Met Pro Thr Pro	Pro Lys Thr Ser His	Gly Glu Gly Val
1520	1525	1530
Ser Pro Thr Thr Ile Leu	Arg Thr Thr Met Val	Glu Ala Thr Asn
1535	1540	1545
Leu Ala Thr Thr Gly Ser	Ser Pro Thr Val Ala	Lys Thr Thr Thr
1550	1555	1560
Thr Phe Asn Thr Leu Ala	Gly Ser Leu Phe Thr	Pro Leu Thr Thr
1565	1570	1575
Pro Gly Met Ser Thr Leu	Ala Ser Glu Ser Val	Thr Ser Arg Thr
1580	1585	1590
Ser Tyr Asn His Arg Ser	Trp Ile Ser Thr Thr	Ser Ser Tyr Asn
1595	1600	1605
Arg Arg Tyr Trp Thr Pro	Ala Thr Ser Thr Pro	Val Thr Ser Thr
1610	1615	1620
Phe Ser Pro Gly Ile Ser	Thr Ser Ser Ile Pro	Ser Ser Thr Ala
1625	1630	1635
Ala Thr Val Pro Phe Met	Val Pro Phe Thr Leu	Asn Phe Thr Ile
1640	1645	1650
Thr Asn Leu Gln Tyr Glu	Glu Asp Met Arg His	Pro Gly Ser Arg
1655	1660	1665
Lys Phe Asn Ala Thr Glu	Arg Glu Leu Gln Gly	Leu Leu Lys Pro
1670	1675	1680
Leu Phe Arg Asn Ser Ser	Leu Glu Tyr Leu Tyr	Ser Gly Cys Arg
1685	1690	1695
Leu Ala Ser Leu Arg Pro	Glu Lys Asp Ser Ser	Ala Met Ala Val
1700	1705	1710

Asp Ala Ile Cys Thr His Arg Pro Asp Pro Glu Asp Leu Gly Leu  
1715 1720 1725

Asp Arg Glu Arg Leu Tyr Trp Glu Leu Ser Asn Leu Thr Asn Gly  
1730 1735 1740

Ile Gln Glu Leu Gly Pro Tyr Thr Leu Asp Arg Asn Ser Leu Tyr  
1745 1750 1755

Val Asn Gly Phe Thr His Arg Ser Ser Met Pro Thr Thr Ser Thr  
1760 1765 1770

Pro Gly Thr Ser Thr Val Asp Val Gly Thr Ser Gly Thr Pro Ser  
1775 1780 1785

Ser Ser Pro Ser Pro Thr  
1790

<210> 300

<211> 284

<212> PRT

<213> Homo sapiens

<400> 300

Ile Thr Leu Leu Arg Asp Ile Gln Asp Lys Val Thr Thr Leu Tyr Lys  
1 5 10 15

Gly Ser Gln Leu His Asp Thr Phe Arg Phe Cys Leu Val Thr Asn Leu  
20 25 30

Thr Met Asp Ser Val Leu Val Thr Val Lys Ala Leu Phe Ser Ser Asn  
35 40 45

Leu Asp Pro Ser Leu Val Glu Gln Val Phe Leu Asp Lys Thr Leu Asn  
50 55 60

Ala Ser Phe His Trp Leu Gly Ser Thr Tyr Gln Leu Val Asp Ile His  
65 70 75 80

Val Thr Glu Met Glu Ser Ser Val Tyr Gln Pro Thr Ser Ser Ser Ser  
85 90 95

Thr Gln His Phe Tyr Leu Asn Phe Thr Ile Thr Asn Leu Pro Tyr Ser  
100 105 110

Gln Asp Lys Ala Gln Pro Gly Thr Thr Asn Tyr Gln Arg Asn Lys Arg  
115 120 125

Asn Ile Glu Asp Ala Leu Asn Gln Leu Phe Arg Asn Ser Ser Ile Lys  
130 135 140

Ser Tyr Phe Ser Asp Cys Gln Val Ser Thr Phe Arg Ser Val Pro Asn  
145 150 155 160

Arg His His Thr Gly Val Asp Ser Leu Cys Asn Phe Ser Pro Leu Ala  
165 170 175

Arg Arg Val Asp Arg Val Ala Ile Tyr Glu Glu Phe Leu Arg Met Thr  
180 185 190

Arg Asn Gly Thr Gln Leu Gln Asn Phe Thr Leu Asp Arg Ser Ser Val  
195 200 205

Leu Val Asp Gly Tyr Ser Pro Asn Arg Asn Glu Pro Leu Thr Gly Asn  
210 215 220

Ser Asp Leu Pro Phe Trp Ala Val Ile Leu Ile Gly Leu Ala Gly Leu  
225 230 235 240

Leu Gly Leu Ile Thr Cys Leu Ile Cys Gly Val Leu Val Thr Thr Arg  
245 250 255

Arg Arg Lys Lys Glu Gly Glu Tyr Asn Val Gln Gln Gln Cys Pro Gly  
260 265 270

Tyr Tyr Gln Ser His Leu Asp Leu Glu Asp Leu Gln  
275 280

<210> 301

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 301

gtctctatgt caatggtttc accc

24

<210> 302

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 302

tagctgctct ctgtccagtc c

21

<210> 303  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 303  
 ggacaaggct accacactct ac

22

<210> 304  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 304  
 gcagatcctc caggtctagg tgtg

24

<210> 305  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 305  
 gtctctatgt caatggtttc accc

24

<210> 306

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic primer

<400> 306

tagctgctct ctgtccagtc c

21